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The Lettsomian Lectures

ON

THE SURGERY OF THE THYROID GLAND,

WITH SPECIAL REFERENCE TO EXOPHTHALMIC GOITRE.

Delivered before the Medical Society of London on Feb. 3rd and 17th and March 3rd, 1913,

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LECTURE III.[1]

Delivered on March 3rd.

MR. PRESIDENT AND GENTLEMEN,—It is with a feeling of relief that I turn from the difficult and not altogether satisfactory subject of exophthalmic goitre and its treatment, which I have been discussing in the two preceding lectures, to that of other forms of goitre. In the previous lectures I had necessarily to deal largely with the opinions and views of others. In this lecture I propose to deal with my subject solely from the point of view of my own experience.

SERIES OF OPERATIONS FOR GOITRE.

My first 400 operations for the removal of goitre have all been published in detail in previous papers,[2] and I do not propose to say anything more about them now. But of the next 351, which are a direct continuation of the earlier series and include all operations of this kind during the five and a quarter years from September, 1907, up to the end of 1912, none have yet been published. I hope it may be of interest to you to hear an account of some of the more important of these operations, together with the lessons that I have learnt from them and the conclusions at which I have arrived—conclusions based upon a study both of these cases and of a still larger number of goitre patients upon whom I have not operated, or upon whom operations other than those for removal of the goitre have been performed.

As you will see from the accompanying Tables I. to VI., these 351 operations were performed upon 345 patients—37 men or boys and 308 women or girls. The ages of the patients

TABLE I.—*Operations for Removal of Goitre of all kinds performed between September, 1907, and Dec. 31st, 1912 (Nos. 401–751). Number of Operations, 351; Number of Patients Operated on, 345—37 Males and 308 Females.*

Ages: from—	Parenchymatous.	Adeno-parenchymatous.	Encapsuled tumours, cystic or solid.	Exophthalmic goitre.	Malignant or papilliferous.	Primary chronic inflammation.	Total.
12 to 14	5	—	—	—	—	—	5
15 to 19	26	1	4	1	—	—	32
20 to 29	24	17	38	5	—	—	84
30 to 39	3	19	67	11	—	1	101
40 to 49	7	21	42	—	3	1	74
50 to 59	2	14	16	—	1	1	34
60 to 69	—	7	5	—	3	—	15
70 to 79	—	—	—	—	1	—	1
80 to 82	—	—	1	—	4	—	5
Total....	67	79	173	17	12	3	351

varied from 12 to 82 years. The youngest patient was a girl aged 12 years. Although goitre is common enough among children of much more tender years, yet it very seldom demands any operation at this period of life. In my opinion operations for goitre in young children should be performed only in those exceedingly rare cases in which life is directly threatened. My reasons for this view are, first, that nearly all goitres in children, being of the pure parenchymatous variety, commonly yield to medicinal treatment; secondly, that any operation on the thyroid gland of a young child involves possible interference with nutrition and growth and also an appreciable immediate risk to life. It is rarely, therefore, that mere deformity can justify a thyroid operation in a child. Adenomata, unless actually causing serious symptoms, are also best left alone.

As an instance of the risk of interference with nutrition and growth I may refer to a patient mentioned in my last lecture on whom I performed the operation of thyroid grafting. This child at the age of 3 developed a small lump in the neck, believed to be a thyroid tumour. At 7 she was healthy and intelligent. The lump was then removed at an infirmary in the country (by whom I know not), and the wound did not heal for six weeks. On returning home the child developed symptoms of mxyœdema or cretinism, became stupid, lazy, and fat, her skin became dry and rough, and her hair brittle. She ceased to grow at all. She was treated with thyroid extract and improved in every way except that no growth took place. I saw her first when she was 11 years old, her height being then 3 ft. 9½ in., the same as when she was 7. The thyroid grafting has had practically no effect, and she still has to continue taking thyroid extract.

PARENCHYMATOUS GOITRE.

The term "parenchymatous goitre," although well established and convenient, is not a good one. It is not the parenchyma of the gland, at any rate in early cases, that constitutes the bulk of the swelling, but the increase of the colloid within the gland, causing distension of the vesicles. Neither is the term "hypertrophy," which is often loosely applied to these goitres, correct, since the functional activity of the thyroid is generally diminished rather than increased. The expression "colloid goitre" is usually more accurate. With regard to diagnosis, although in the later stages, when there is a tendency to fibrosis, cystic and adenomatous degeneration and calcification, some slight difficulty may be experienced, the recognition of the pure parenchymatous goitre is, as a rule, quite simple. The diagnostic point is the uniform enlargement of the gland, from which it follows that the swelling is always bilateral and the lobes of equal, or nearly equal, size.

There is one exception, however, to this statement. It occasionally happens that one-half of the gland is congenitally absent. In such a case the enlargement on the one side only may easily be mistaken by the unwary for an adenoma or cyst. The shape of the goitre, however, which is that of a normal lobe, not globular like an encapsuled tumour, should suffice to put the observer on his guard.

That such cases are sufficiently common to be of practical importance is shown by the fact that twice in the present series (Nos. 483 and 678) have I come across such a condition. Had I not recognised in time that the opposite lobe was absent I might easily have committed the serious error of accidentally removing the whole gland. In a third case, of an adeno-parenchymatous goitre, the opposite lobe was rudimentary, and not larger than a haricot bean. In all these three cases I contented myself with doing only a partial removal of the lobe, and no harm ensued.

Occasionally a very soft adenoma of unusual shape may present, after removal, considerable resemblance to a parenchymatous goitre, and I have known such a specimen described as a unilateral parenchymatous one.

Treatment.

Most parenchymatous goitres should, of course, not be treated by operation, but rather by removing, if possible, the cause, or by medicinal means, such as the administration of iodine in some form or other, or of arsenic or thyroid extract. The subjects of parenchymatous goitre often suffer much from constipation, and it is worth mentioning that simple attention to the bowels will often cause shrinking of the tumour by withdrawing fluid from it. The subject of vaccine treatment of parenchymatous goitre is one that lies somewhat outside the scope of my lectures; it is, however, well worthy of attention, and my medical colleague, Dr. Frederick Langmead, has recently been treating several cases by this means with markedly good results. Both vaccine treatment and the fascinating subject of the causation of goitre have recently been fully dealt with by my

[1] In illustration of this lecture 85 photographs and diagrams were shown by means of the epidiascope. Lectures I. and II. were published in THE LANCET of March 1st (p. 583) and 8th (p. 668), 1913, respectively.

[2] Proceedings of the Royal Society of Medicine, December, 1907, and elsewhere.

friend, Major R. McCarrison, I.M.S., in his admirable Milroy lectures [3] delivered recently before the Royal College of Physicians of London, and now published in book form.

Although the very great majority of parenchymatous goitres require no operative treatment, there is, nevertheless, a small minority in which operation is more or less urgently demanded on account of dyspnœa. A parenchymatous goitre which does not yield to medicinal treatment, and which is growing and causing serious dyspnœa, generally demands operation. A growing parenchymatous goitre causes side to side flattening of the trachea, and if it be situated low down near the upper opening of the thorax, so that it cannot expand freely, the pressure upon the trachea may easily, and sometimes rapidly, lead to fatal suffocation. It is especially in young subjects, at or soon after the age of puberty, that the danger of suffocation is greatest, since at this age the soft and yielding nature of the tracheal wall readily permits of collapse.

In older subjects the same compression may occur, but much more slowly, and there is usually ample warning before a fatal issue need be feared. It is not so much the big

TABLE II.—*Chief Reason for Operation.*

	Operations.
Dyspnœa	209
Deformity	17
Discomfort or deformity (with minor degrees of dyspnœa)	57
Malignant and papilliferous tumours	9
Suspected malignancy	3
Dysphagia	2
Increasing size	3
Typical exophthalmic goitre	17
Palpitation, nervousness, &c. (mostly with dyspnœa)	34
Total	351

prominent goitre that is dangerous to life but the small deep-seated one, the presence of which may be scarcely noticed by the patient, who often attributes the dyspnœa to "asthma."

In the present series of operation cases, as you will see from this table (Table III.), there were 148 cases of parenchymatous or adeno-parenchymatous goitre, in nearly all of which it was dyspnœa that led to the operation.

Operations for mere deformity are rarely justifiable for purely parenchymatous goitre. There are but three such cases in my list. It occasionally happens, however, that a young woman has a large and very prominent purely parenchymatous goitre which is a horrible disfigurement and

TABLE III.—*Nature of Goitre.*

Non-encapsuled :—		
Parenchymatous	67	
Adeno-parenchymatous	79	
Papilliferous (2 patients)	6	
Malignant	6	
Primary chronic inflammation	3	
Exophthalmic	17	178
Encapsuled :—		
Solid adenoma	66	
Cystic adenoma	105	
Pure cyst	2	173
Total		351

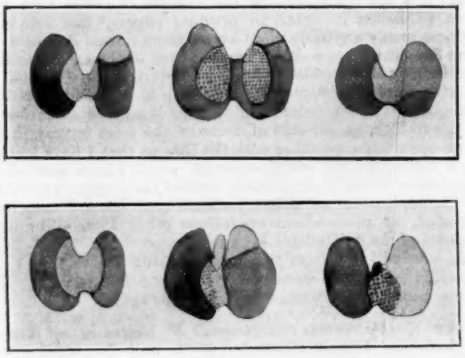
yet causes no dyspnœa. Although I dislike operating in such cases, I occasionally do so if the patient is very anxious to get rid of the deformity and willing to run a certain amount of risk. Unless the operation is a bilateral one, which increases the risk, or is performed in two stages, the deformity is not completely removed and the patient is left with a lop-sided tumour, perhaps no less unsightly than the original symmetrical one.

Some Points in Regard to Operating.

Speaking of bilateral operations for parenchymatous goitre, let me remind you that, when operating on such goitres in young subjects with urgent dyspnœa, it is by no means always possible to be content with a unilateral intervention. It has many times happened to me to find that after removal of one lobe or most of it the remaining lobe has pushed the soft and flattened trachea so much away from the middle line as to cause kinking of the trachea and thus to increase the dyspnœa. In such a case it may be highly dangerous not to remove part of the second lobe as well. The operator who is about to embark on the removal of a goitre for urgent dyspnœa in a young subject will do well to remember this point, or he may perhaps find himself, after removal of one lobe, in the difficult position of having already done as severe an operation as the patient will stand, and yet compelled to go on and do more, lest the patient die of suffocation.

Let me here urge that complete removal of the whole lobe is seldom desirable. A piece of gland, if only a little piece, should always be left, preferably at the hilus, where the inferior thyroid vessels enter, partly to carry on the function of the gland, partly to protect the recurrent nerve from injury or from becoming involved in scar tissue, and partly to fill up the unsightly hollow that would otherwise be left on that side of the neck. Sometimes it is convenient to leave a portion of the upper horn, tying the superior thyroid vessels a little below the apex of the gland rather than above it.

When I am obliged to operate upon both sides at one operation my usual practice is to remove most of the first lobe and about one-third or one-half of the second, including usually the lower pole. In older subjects in whom the trachea is more rigid, and consequently less liable to collapse, the necessity for interfering with the second lobe is very much less. The accompanying rough diagrams, taken from sketches made by myself immediately after the operation, show the amounts of goitre



Six diagrams of parenchymatous and adeno-parenchymatous goitres to show the amount of gland removed in each case. Dark areas show portions removed, dotted areas where front part only was removed. From sketches made immediately after each operation. (Operation cases 417, 445, 456, 469, 471, and 537.)

removed in six cases of parenchymatous or adeno-parenchymatous goitres.

Into the details of the various operations for the removal of parenchymatous and other forms of non-encapsuled tumours of the thyroid I do not propose to enter. I have described them fully elsewhere.[4] I will merely sum up the principal points by saying that the operation must be one or other of the varieties of extirpation, as opposed to intra-glandular enucleation, which is of course not possible in these cases, and can be employed solely for encapsuled tumours.

The gland must be freely exposed, all layers of infrahyoid muscles and fascia being carefully divided until the actual surface of the gland is reached. The greatest care should be taken not to prick or otherwise injure the numerous thin-walled veins upon the surface of the gland itself, since hæmorrhage from these is extremely difficult, sometimes impossible, to control with ligature or forceps.

Main vessels should be secured outside the gland as early as possible, and not until the lobe has thus been freed above, below, and outside should any attempt be made to cut across it in the neighbourhood of the hilus. Above all, the operator should proceed cautiously and deliberately, avoiding

[3] THE LANCET, Jan. 18th (p. 147) and 25th (p. 219), and Feb. 8th (p. 365), 1913

[4] In Burghard's System of Surgery, vol. iii., Frowde and Hodder and Stoughton, 1909; also in Berry's Diseases of the Thyroid Gland, J. and A. Churchill, 1901 (now out of print, but of which it is expected that a new edition will be published this year).

or checking, whenever possible, all hæmorrhage as he proceeds, and being careful to keep the wound free from blood, so that he can see at every stage exactly what he is doing and what he is about to cut.

A very thick isthmus renders difficult the displacement forwards of the lobe and increases the difficultiesof the operation. A parenchymatous goitre often has a prolongation extending inwards behind the pharynx almost to the middle line. The operator must carefully follow this prolongation until its edge is reached, rotating the gland and with it the larynx and trachea as much as the dyspnœa and the anæsthetist (if a general anæsthetic is being given) will allow.

The position of the recurrent nerve must be kept carefully in mind while the operator is dissecting at the inner and back part of the gland. If he will remember that the nerve is sometimes displaced outwards by the goitre even as much as half an inch, and that it can be drawn forwards to a certain extent when the goitre is dislocated out of the wound, he is not likely to cut it. If, however, he gets into trouble with hæmorrhage from branches of the inferior thyroid artery just as this is breaking up, in close proximity to the nerve, it is not difficult to injure the latter with forceps or ligature. Personally, I never make any search for the nerve or attempt to dissect it out and hold it aside, as I used to do years ago. Such a proceeding involves considerable risk of the nerve becoming subsequently involved in scar tissue. It is better to avoid the region of the nerve altogether by keeping well in front and outside it. Herein lies one of the advantages of leaving a portion of the gland instead of removing the whole lobe.

In some few cases of malignant disease and in one case of primary chronic inflammation I have deliberately removed part of the nerve in order to effect a more thorough removal of the disease.

ADENOMATA AND CYSTS OF THE THYROID.

I come next to the adenomata and cysts of the thyroid, tumours which have a definite capsule of their own. The capsule of the tumour must be carefully distinguished from the capsule of the thyroid itself, the glandular capsule. As a rule the older the tumour the better marked and more easily distinguished is its capsule. It is only in the case of recent soft adenomata that there is any real difficulty in its definition. Now, encapsuled tumours permit of *intra-glandular* enucleation or shelling out of the tumour from the surrounding gland tissue. In the case of small tumours—say those not larger than a hen's egg—it is often permissible to do a simple enucleation, incising the gland until the tumour is reached and then shelling it out. But the amount of hæmorrhage attending this operation is very variable and may be excessive. It is often difficult to control. I remember many years ago seeing a skilful and experienced surgeon treat in this very way an elderly woman with a well encapsuled tumour about as large as a goose's egg. Hæmorrhage was so profuse and difficult to control that he eventually packed the wound; but oozing of blood continued, and the patient died a few hours afterwards.

Of late years I have been practising simple enucleation less and less, substituting for it the much more satisfactory operation known as resection-enucleation. This consists, as is well known, in proceeding as for extirpation in all the earlier stages of the operation, as far as the isolation and dislocation of the lobe. Pressure forceps having then been applied to the larger vessels visible on either side of the line along which it is proposed to cut, the gland is incised over a limited area, generally on the front and inner aspect of the tumour, until its surface has been reached. The shelling out is then performed at the inner and back part of the tumour only, until the operator has got well beyond the region of the recurrent nerve. The glandular capsule is then again cut through and the whole tumour removed, together with most of the thin and functionally useless gland tissue covering it. By this means the size of the enucleation wound, from which hæmorrhage occurs, is greatly diminished. If the tumour is a large one, or if for any reason the operation is likely to be accompanied by serious hæmorrhage, it is prudent to tie the superior thyroid vessels or even the inferior as well, before incising the gland. Personally it is only in exceptional cases that I now do either, as I find it is usually quite easy to prevent the hæmorrhage by placing forceps on the vessels on the surface of the gland before the latter is incised. It need scarcely be said that after placing forceps upon vessels in their continuity, care must be taken to cut round them lest the ligature should slip. If the tumours are multiple it is often best to perform an extirpation rather than any kind of enucleation.

TABLE IV.—*Nature of the Operation.*

Enucleation:—	
Resection-enucleation	165
Enucleation (pure)	25
Combined resection-enucleation and enucleation ...	10—200
Extirpation:—	
Resection-extirpation	119
Extirpation (pure)	24—143
Combined extirpation and enucleation	7
Skin incision only	1— 8
Total	351

I may here allude to the fact that different operators use different terms in describing what is practically the same operation. Thus resection-extirpation, resection-enucleation, and intracapsular extirpation are all practically the same; in all the lobe is isolated before the gland is incised. In all, the later stages of the removal are conducted inside the gland. But in intracapsular extirpation the whole lobe is removed except a portion of the glandular capsule at the inner and back part. In resection-extirpation the line of section is made somewhat further out, so that a piece of gland, small or large, as may be desired, is left behind. Resection-enucleation resembles the latter, but differs from it in that the presence of an encapsuled tumour enables the separation to be made with blunt instruments rather than with the knife or scissors, as it must be when dealing with a parenchymatous or other non-encapsuled form of goitre. The so-called *intra*-capsular enucleation of a lateral lobe, and worse still, *extra*-capsular enucleation of a whole lobe, are operations that should, in my opinion, never be attempted. Yet, in days when the main principles of thyroid surgery were not well understood, I have seen a surgeon do this latter operation under the impression, I think, that he was doing an ordinary intraglandular enucleation! The patient not unnaturally died.

Adeno-parenchymatous goitres—that is, parenchymatous goitres in which are embedded one or more encapsuled tumours—are generally to be treated like purely parenchymatous ones, by extirpation. (Figs. 1 to 4.) A common type of case is that in which there is a prominent rounded tumour, evidently an encapsuled one, but behind it, under the sterno-mastoid, there is also a considerable enlargement of the whole lobe. In such cases it is not uncommon to find a considerable mass extending down behind the clavicle or sternum, and the operation may prove to be much more formidable than was expected. Whenever there is much dyspnœa accompanying a prominent and apparently superficial cyst or adenoma, the presence of such a deep prolongation should be strongly suspected. Here is such a case, a woman, aged 42, whose tumour after removal weighed 10½ oz.

Another point to which I may draw your attention in connexion with bilateral goitres of any kind, but especially adeno-parenchymatous ones, is that the more prominent lobe is often not the one which is causing the dyspnœa. The operator must take care lest he remove the wrong lobe. Prominent tumours and tumours situated high up in the neck usually cause comparatively little dyspnœa. It is the deep-seated tumours, low down, that cause the most severe symptoms, although it is the others which cause deformity and to which the patient attributes his difficulty in breathing.

This leads me to say a few words on the position of encapsuled tumours. Those that spring from the front of the gland and grow forwards are easily diagnosed. But occasionally one meets with a patient who complains much of dyspnœa, but who has apparently only a small and freely movable parenchymatous goitre, one that seems unlikely to cause much trouble. (Figs. 5 and 6.) In these cases it is not unlikely that the main cause of dyspnœa is an encapsuled tumour, perhaps quite a small one, lying at the back of one lobe close to the trachea, but well covered by the rest of the gland which prevents it from being felt.

The displacement forwards of the whole lobe is often the key to the diagnosis in such a case. Endotracheal examination often affords much help in the diagnosis.

INTRATHORACIC GOITRES.

Of all innocent goitres the most important in many ways, and certainly those that most urgently demand operative treatment, are those which affect especially the lower horn of the gland. They tend to extend downwards behind the sternum and into the thorax. Many, perhaps most, goitres extend a little way downwards behind the sternum without causing any trouble. It is only when they extend below the level of the first rib and then enlarge in this situation and cause pressure that they deserve the name of *intrathoracic goitres*. Such cases are among the most satisfactory in the whole range of thyroid surgery. They usually cause most

TABLE V.—*Operations for Intrathoracic Goitre (in Series 401–751). Total—Operations 18; Patients 18.*

Males	3	Parenchymatous	3
Females	15	Adeno-parenchymatous	12
		Solid adenoma	2
Unilateral operations	12	Cystic adenoma	1
Bilateral ,, ...	6		
		Complete recovery	17
		Death	1

severe dyspnœa and often produce great distension of the veins at the root of the neck. Fortunately they can almost always be removed without great difficulty or danger and the benefit to the patient is very great. In the present series I have no less than 18 such intrathoracic goitres.

Case 568 is that of a woman, aged 61, who, when I first saw her, was in an extremely miserable and dangerous condition, with severe dyspnœa due to a slowly increasing adeno-parenchymatous goitre of many years' duration. She was quite unable to lie down, had much bronchitis, a poor pulse, and a clammy skin. The photograph shows the condition after she had been kept quietly in bed for some days to allow the venous distension to subside. The tumour removed weighed 11½ oz., the lowest part only being within the thorax.

Another case (721) is that of a gentleman, aged 62, who had been the subject of slowly increasing stridor and dyspnœa for more than 15 years. He had a small lump low down on the left side of the neck, scarcely visible or palpable except during deglutition. A skiagram (Figs. 7 and 8), however, revealed the fact that on the *right* side, the side on which I could neither see nor feel any distinct tumour in the neck, there was a large intrathoracic mass. It extends, as you will see, as low as the level of the sixth rib behind. This tumour I removed in October last chiefly by means of a large scoop and an ordinary silver tablespoon. On the left side was a smaller mass, of the size of a Tangerine orange, which was also removed from the thorax. The total weight of the two masses was 10 oz. I saw him a few days ago and found him in robust health, without a trace of dyspnœa, and he is now enjoying himself on a tour in France.

Seventeen of the 18 intrathoracic cases made good recoveries and were completely freed from dyspnœa. In six of these the operation was bilateral, tumours being removed from both sides of the thorax.

One patient died; this was a lady, aged 56, with severe dyspnœa and a bilateral solid tumour extending for several inches into the thorax on *both* sides. The operation was attended with great difficulty owing to the fixity and solidity of the goitre, and she died about an hour after its completion. The enormous distension of the veins about the root of the neck and upper part of the thorax was a marked feature of the case. The left innominate vein was completely occluded by the long-continued pressure upon it.

In removing intrathoracic goitres I would lay stress upon two points—first, tie as many veins as possible below and outside the cervical portion of the tumour before any attempt is made to extract the tumour; secondly, avoid passing the finger or instrument of any kind *in front* of the tumour. But at the back a space will be found which is free from veins. Into this space a finger or a scoop can be passed and the tumour then extracted. Sometimes it is possible to diminish the size of the intrathoracic portion by breaking into a cyst, if there is one; sometimes I have had to lay hold of the tumour with flat-bladed forceps, sometimes I have had to break up a solid tumour before I could extract it through the narrow upper opening of the thorax. But all these methods may involve serious risk of hæmorrhage. A very convenient instrument for the removal of intrathoracic goitres which extend beyond the reach of the finger is an ordinary tablespoon with the handle bent to a suitable curve. The possibility of removing these deeply seated intrathoracic goitres depends upon the important anatomical fact that the vessels run into the tumour from above and not from below. Most of these cases require drainage for a few hours only. It is remarkable how quickly the lung expands and fills up the cavity from which the tumour has been removed. In 15 out of 18 cases primary union took place; in one case a small sinus formed and did not close for some weeks; one case had to be treated with gauze packing and drainage for several weeks, but has made an excellent recovery.

Of *papilliferous tumours* the most remarkable was that of the lady aged 79, depicted in Figs. 9 and 10. The tumour, which weighed no less than 2¼ lb., ruptured through the skin just as she got on to the operating table. She made a rapid recovery and left the nursing home in excellent health a fortnight later. She subsequently underwent several operations for recurrence, and Fig. 10 shows her condition two years and five months later, just before my third operation upon her.

MALIGNANT DISEASE OF THE THYROID.

I come now to sarcoma and carcinoma, of which only a small number, six in all, appear upon my list. The great majority of the cases that have come under my notice were already too advanced to permit of any chance of removal by operation. If malignant disease is ever to be cured by operation the operation must be undertaken before the growth has penetrated the glandular capsule. Unfortunately, penetration of the capsule usually occurs very early, especially in the inner and posterior part. Hence, the early involvement of the recurrent nerve and fixation to the trachea and œsophagus.

Some Cases Illustrating the Advanced Stage of Malignant Growth when First Seen.

The ordinary symptoms by which the diagnosis is usually made, such as pain, dysphonia, dysphagia, and perhaps dyspnœa, are produced by involvement of extraglandular structures. The diagnosis, if it is to be made sufficiently early to be of any use, must be made (or at least suspected, for it often cannot be made with certainty) by the character of the tumour itself. The earliest stages of malignant disease are often so wholly free from symptoms that the patient may be quite unaware of the existence of the malady until it has advanced hopelessly beyond the reach of operation. Two striking instances of this have recently come under my notice.

One was that of a medical man, aged 43, whom I saw in 1912 with Mr. W. D. Harmer. The day before we first saw him he had noticed, while shaving, a slight swelling at the root of the neck. He was in perfect health and had had no symptoms whatever except a very slight huskiness of voice, which had been present for three weeks, and to which he himself had attached no importance, believing it to be caused by excessive smoking. Both lobes of the thyroid were occupied by a symmetrical, rather deeply seated, densely

DESCRIPTION OF ILLUSTRATIONS.

FIG. 1.—Adeno-parenchymatous goitre in a woman aged 42; the right and middle lobes were removed for deformity and dyspnœa, and weighed 21 oz.

FIG. 2.—The preceding about 10 days after operation.

FIG. 3.—Adeno-parenchymatous goitre in a woman aged 22, removed for deformity and dyspnœa.

FIG. 4.—Section of a portion of the tumour removed from the preceding; it weighed 13 oz.

FIG. 5.—Left cystic adenoma removed for dyspnœa from a woman aged 39.

FIG. 6.—The preceding, seven days later, showing the usual position of the scar, low down in the neck, where it can easily be hidden by a necklace.

FIGS. 7 and 8.—A large double solid intrathoracic goitre, removed from a gentleman aged 62 on account of severe dyspnœa of many years' duration. (Case 721.) Before and a few weeks after operation.

FIG. 9.—Papilliferous, almost wholly solid, tumour in a lady aged 79 years; just before operation.

FIG. 10.—The preceding 2 years and 5 months later; showing recurrence at the upper part of the neck.

FIG. 11.—Large prominent carcinoma engrafted on an old adenoma.

FIG. 12—The preceding, about a fortnight after removal of the tumour, which weighed 1 lb.

FIG. 1.

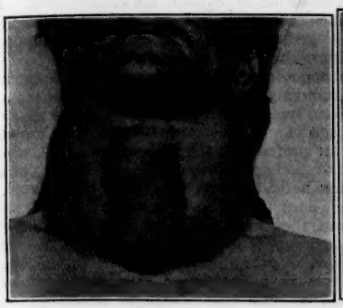


FIG. 3.

FIG. 5.

FIG. 2.

FIG. 4.

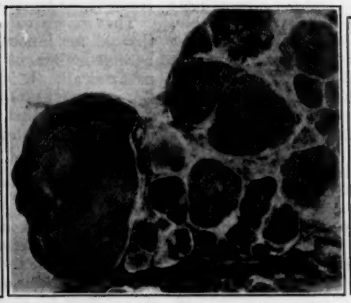


FIG. 6.

FIG. 7.

FIG. 9.

FIG. 11.

FIG. 8.

FIG. 10.

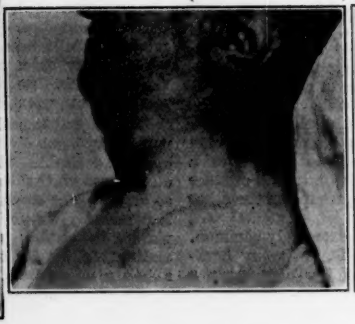
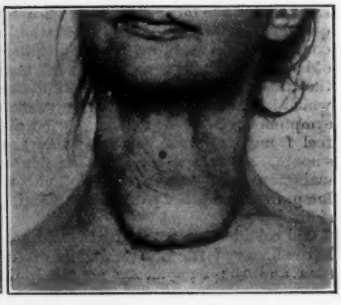


FIG. 12.



hard swelling; the whole gland was, perhaps, four or five times its natural size. Although moving freely with the trachea on swallowing, it was quite immovable upon the latter, and was evidently hopelessly incorporated with it. About the diagnosis there was not the slightest doubt, and it was equally evident that removal by operation was quite out of the question. At the urgent wish of the patient, however, I cut out a small piece from the isthmus for microscopical examination. This showed round-celled sarcoma of a very bad type. The little wound healed at once, and the next three or four weeks were spent at the seaside in comparative comfort. Dyspnœa then set in rather rapidly, and an urgent tracheotomy was eventually performed at his home in the country, the patient dying just five weeks after Mr. Harmer and I first saw him.

The other case was that of a man, aged 18, who was sent to me at the Royal Free Hospital on account of a rather large prominent bilateral goitre of four months' duration which was causing few symptoms, but which the patient wished to have removed, chiefly, I think, on the ground of deformity. It was at once evident, however, from the wooden hardness of the tumour, its fixity to surrounding structures and paralysis of one recurrent and the sympathetic nerves, that the tumour was malignant and quite inoperable. Dr. Albert Kocher, who chanced to be in my wards that morning, saw the case with me and took the same view that I did on both these points. We considered the case to be one of spindle-celled sarcoma. The tumour grew steadily, and three and a half months later, as dyspnœa was beginning to be troublesome, he was admitted to hospital for tracheotomy, which, however, was never done, as the patient a few days later developed a high temperature and rapidly died, probably from penetration of the œsophagus by the growth, leading to septic infection of the tumour, and of the cellular tissue of the neck. There was no post-mortem examination.

In both these cases, and they are not uncommon, for I have seen several others like them, it was the early involvement of the trachea, before very marked symptoms had set in, that made them hopelessly incurable when first seen. On the other hand, when malignant disease attacks a pre-existing goitre, as it often does, it may attain a very considerable size and yet be operable, especially if the growth extends forwards rather than backwards.

Figs. 11 and 12 show a woman, aged 47, whom I was able to relieve temporarily by the removal of a malignant tumour weighing 16 ounces. Primary union took place, but the patient died at home from recurrence some six months later. The specimen shows evidence of an adenoma of very long standing with extensive malignant disease engrafted upon it.

Most of the cases of malignant disease that have come under my notice have given a history of several weeks' or months' duration. The history has usually been that the patient first noticed a small hard lump, which was taken to be an ordinary innocent tumour and treated as such until paralysis of a vocal cord, or of the sympathetic, or dysphagia or pain, has roused a suspicion of malignancy. By the time I see the patient the diagnosis is usually only too evident and the hopelessness of operative treatment is equally obvious.

Differentiation of Malignant Disease from Innocent Tumour.

The presence of a recently developed small hard lump in the thyroid of a middle-aged or elderly person should always raise a suspicion of malignancy even if no other sign or symptom is present. Unless it can be clearly established that such a tumour is not malignant, and it often can, the question of an exploratory operation should at once be considered. But it must be remembered that the majority of such small hard tumours are *not* malignant; more often they are small tense cysts or old fibrous or calcified masses which have been in existence for years, although causing no symptoms. Cysts can generally be distinguished by their feel from malignant tumours; they are often globular and smooth, they lack the peculiar dense wooden feel of a malignant new growth; it is not uncommon to find another lump in some other part of the gland, perhaps on the other side.

Old calcified masses in the thyroid are extremely common. If the history is deceptive, and it often is, the stony hardness and the irregularity may help in the diagnosis; a tumour which is of stony hardness in one place and soft in another is much more likely to be innocent than malignant. I find it difficult, however, to explain the difference in the feel of an old calcified goitre and a malignant tumour, although the difference is generally very obvious to anyone who is familiar with both.

I see no need to quote many examples of these common forms of innocent tumour which simulate malignant disease. I will merely give one typical example.

Several years ago I was consulted by a well-known member of our own profession, then aged nearly 70, who was in a state of considerable trepidation on account of a small hard lump that he had recently noticed in his thyroid. A smooth, rounded, hard tumour, which moved freely both with, and apart from, the trachea, left no doubt in my mind that the lump was a harmless cyst, and I was able to assure the patient that not even an exploratory operation was necessary. The tumour might never grow or cause any trouble, and it would be quite time enough to interfere with it whenever it began to give trouble. I have from time to time examined the tumour again and found that it is not causing any inconvenience whatever, and the patient wisely treats it, as he tells me, with contempt.

That extensive operations should be performed upon the thyroid for innocent cysts on the ground that they may become malignant is teaching with which I have no sympathy at all. It is on a level with the doctrine which occasionally one hears, even sometimes from those who ought to know better, that a simple cyst of the breast should be treated by complete removal of that organ lest it become cancerous.

Selection of Cases and Extent of Operation.

In determining whether there is any probability of being able to make a complete and satisfactory removal of a malignant tumour the most important point is its mobility upon the trachea. Many a tumour which moves freely on deglutition and is apparently easily removable will be found at operation to be hopelessly incorporated with the wall of the trachea, the œsophagus, or carotid sheath.

In a doubtful case it may be worth while to attempt removal, even if the tumour is of considerable size. Thus, in December last I removed from a male patient, aged 68, a malignant tumour as large as a lemon, but I had to dissect it off the œsophagus to which it was adherent. Tracheotomy had to be done in the course of the operation. The patient recovered rapidly from the operation and left the home three weeks later with a healthy granulating wound and a tracheal fistula. He was much relieved, especially from his dysphagia, which had been the most prominent symptom before operation; indeed, he had been quite unable to swallow solid food.

Undoubtedly the most satisfactory cases for operation, or perhaps I should say the least unsatisfactory, are those in which malignancy attacks a pre-existing encapsuled tumour, as there is then a somewhat better chance of removing the whole disease.

A few words now about the question of how much gland should be removed in cases of malignant disease. I see no necessity for removing the whole gland, and believe that practically it is always possible, and better for the patient, to leave some portion of the gland, generally the upper horn of the opposite lobe. Malignant disease affecting both lobes is seldom, if ever, operable, unless one is prepared to do an enormous operation, including excision of large portions of trachea, larynx, or œsophagus. I very much doubt if such operations are justifiable. They do not cure the patient and almost invariably leave him in a much more miserable condition than before. If the disease is confined to one lobe recurrence will take place, not in the remaining upper horn of the other side, but in the extraglandular structures on the same side. So that practically nothing is gained by a total removal, even in an early case.

With regard to palliative operations, I can touch upon one point only—namely, that early tracheotomy is not, in my opinion, desirable. Those who advocate this proceeding do so on the grounds that the early operation can be performed under so much better conditions than if it is left till later on; but I, personally, do not consider this to be sufficient reason for placing the patient, who is possibly in good general health and not suffering at all, at once in a condition of considerable discomfort from which he will never recover. My usual

practice is to explain the position to the patient and to say that tracheotomy shall be done as soon as the patient himself demands it. I have thus often given a patient several months of good general health and comparative comfort which he would otherwise never have had. It should not be forgotten that a good many patients with malignant disease go on to the end without ever requiring tracheotomy at all, dying from some other symptom. This is especially apt to be the case with tumours that grow prominently forward.

RESULTS.

It will be seen from Table VI. that in 316 cases the wounds healed by primary union without any trouble. Drainage, generally for 18 hours, was employed in all but seven cases.

Five cases died from causes more or less directly connected with the operation. Of these, two have already been described in these lectures: one a bilateral excision of

TABLE VI.—*Healing of Wound (346 Operations).*

	Operations.
Primary union	316
Primary union, except in track of drain; healing in 10 days to a few weeks	14
Secondary union after gauze packing; healing in from 12 days to 6 weeks	6
Apparent primary union, late mild suppuration after leaving hospital or home	2
Mild suppuration, chiefly stitch abscesses, &c.; healing in a few days to 3 months	7
Wound (malignant) not yet healed (recent case)	1
Total	346

exophthalmic goitre, the other a bilateral intrathoracic goitre with severe dyspnœa. Of the other three, a woman, aged 38, who was known to have mitral disease, had a severe attack of cardiac syncope during the removal, for dyspnœa, of a solid adenoma as large as an orange. The operation presented no unusual difficulty. An hour after the operation had been satisfactorily completed another similar cardiac attack occurred in which she died. A woman, aged 25, died suddenly from cardiac syncope immediately after the skin incision had been made preparatory to the removal of a parenchymatous goitre for dyspnœa. The necropsy showed a large persistent thymus. Death in this case was clearly due to cardiac and not to respiratory trouble. A girl, aged 14, died unexpectedly 12 hours after a bilateral resection-extirpation of a parenchymatous goitre weighing 4½ oz. The operation, which was performed for dyspnœa, lasted less than half an hour and presented no unusual difficulty.

The vast majority of the patients made excellent and rapid recoveries and were completely freed from their symptoms.

All cases are asked to report themselves periodically after leaving hospital or home, and I am greatly indebted to the numerous medical men who have kindly written me reports of the latest condition of their patients. Among such a large number of patients it is not surprising that some should since have died from other diseases. Besides most of the malignant cases, only two patients are known to have died, one from phthisis a year later, and one from some obscure heart affection while abroad eight months after operation. Both had made rapid recoveries from their operations. A large number of the patients have volunteered the statement not only that they have been completely relieved of all trouble in breathing, but that the general health has improved very greatly. There are few patients who are more grateful for what has been done for them than those from whom a suffocating goitre has been removed by operation. Many of these had suffered for years from chronic dyspnœa.

In conclusion, I should like to express my thanks to my former house surgeon, Dr. Margaret G. Thackrah, for much valuable help in the preparation of these lectures.

THE demonstration of the treatment of cancer by radium to be given at the Cancer Hospital, Fulham-road, S.W., by Dr. R. Knox on March 19th at 5 P.M., will be held in the new electrical department, the whole of which will be open to inspection.

ALIMENTARY TOXÆMIA.[1]

BY W. HALE WHITE, M.D. LOND. & DUB.,
SENIOR PHYSICIAN TO GUY'S HOSPITAL.

I AM much honoured by being asked to open this debate, but the subject is so difficult and so wide that it would be beyond me to give a proper survey of it even if I had more than half an hour; therefore, I ask you to forgive the inadequacy of what I am about to say.

The term "alimentary toxæmia" at once shows our ignorance, for it is unscientific to group cases of poisoning according to the point of entrance of the poison—they should be grouped according to the variety of the poison; it is a minor matter whether our murderer comes in at the window or the door. Further, the term is too wide; an illness due to any poison absorbed anywhere from the mouth to the anus is strictly an alimentary toxæmia, but the phrase would hardly cover a case of opium poisoning. The user of it probably wishes to suggest that an illness is due to poisons made by micro-organisms resident in the alimentary canal, although with our present knowledge he can never name the poisons, nor is he certain of the offending micro-organism; still, we are equally ignorant of the poison in uræmia and diabetic coma. But it is not clear that it may not be used when micro-organisms from the alimentary tract—e.g., bacillus coli—pass into the blood and so cause illness, and it is somewhat confusing that if infected food causes poisoning we talk of food poisoning, not food toxæmia; on the other hand, when the food is not infected by pathogenic micro-organisms but makes the person who eats it ill, he is by some said to be suffering from alimentary toxæmia—e.g., as in a person who has urticaria after eating strawberries.

The simplest alimentary toxæmia is that due to pyorrhœa alveolaris. This local trouble in the mouth leads to imperfect mastication; hence large pieces of food are swallowed which cannot be digested, and if they contain micro-organisms which, if the mass were properly masticated, would be set free in the stomach and destroyed there, they may indirectly lead to the production of poisons in the intestine. Further, the micro-organisms discharged in the pus from the gums may be swallowed, and it is possible that the gastric secretions being abnormal or deficient may not kill them, or that if the stomach is well filled with solid food and the micro-organisms are then washed down with a draught of water they, suspended in the water, will be rapidly passed through the stomach on the top of the solid food, and hence reach the intestine and cause intestinal toxæmia. It may be that in some diseases micro-organisms found in the intestine have been excreted from the blood, and that such organisms may when in the intestine manufacture poisons. Micro-organisms taken into the blood from the diseased gums may perhaps cause intestinal toxæmia in this way. Lastly, the micro-organisms in the gums may pass into the blood and cause septicæmia varying from mild to severe. I have met with several fatal cases, and very many persons owe general ill-health or chronic indigestion to pyorrhœa. It is surprising how often this is overlooked; when seeing a patient for the first time it is as important to examine the teeth as to feel the pulse. Although most common among poor, ill-educated people, pyorrhœa is often to be found in those who presumably clean their teeth properly, and frequently sufferers from it are unaware that they have anything amiss with their teeth. Its presence does not prevent the patient from having other illnesses; sometimes these are wrongly attributed to pyorrhœa. It is dangerous to remove too many affected teeth at once, for a rapid absorption of micro-organisms may take place by the damaged vessels. The value of vaccines will be discussed later by others. My own practice is to give them, for I have never known them do harm in this condition, and I think I have seen them do good.

When we consider bacterial poisons formed in the gastro-intestinal tract the difficulties are so great that we may almost despair of understanding the subject. External temperature is said to play a part, for although in temperate and tropical climates the lower intestines of animals which have been weaned swarm with micro-organisms—a human

[1] Being the opening address on the subject delivered before the Royal Society of Medicine on March 10th, 1913.

being excretes daily 128 billions, 99 per cent. of which are dead, in the fæces—yet the intestinal contents of Arctic animals are by some observers stated to be sterile or almost so, suggesting that it would be a good thing to establish at Spitzbergen a health resort for those thought to be suffering from alimentary toxæmia. Ill-understood alterations in the gastro-intestinal contents must influence their bacteriology; thus bacillus coli is usually confined to the large intestine, but I know a woman who is suffering from severe dyspepsia, and in whom lavage always shows the contents of the stomach to be swarming with bacillus coli. Then the presence of one micro-organism affects others; for example, one of the chief functions of the bacillus coli is to smother others either by making bodies poisonous to them or by withdrawing their nourishment; it thus kills typhoid bacilli, a fact of interest when we remember that bacillus coli may often be found in the urine of those afflicted with typhoid fever. On the other hand, the bacillus coli may itself be killed by invaders—e.g., Morgan's bacillus, B. suipestifer, B. enteritidis. Then the same micro-organism may act differently in different hosts—e.g., one person's strain of B. coli often differs from another's. Again, alterations at one part of the intestine will affect processes going on lower down; for instance, colon bacilli have no effect on proteins, but they decompose (putrefy) peptones. If, therefore, there is complete absorption in the small intestine, no peptones will reach the large, and so there will be no putrefaction, nor will there be if only unaltered proteins reach the large intestine, but any peptones will putrefy. We hope to hear from the bacteriologists which are the micro-organisms causing alimentary toxæmia. Herter taught us that there are probably three groups of cases: (*a*) the indolic, in which the probable fault was that the colon bacillus invaded the lower part of the small intestine, and the patient was unable to digest carbohydrates and usually passed abundance of indican; (*b*) the saccharo-butyric, in which the organism mostly concerned is the B. aerogenes capsulatus—the abnormal changes here occur in the large intestine; (*c*) a group combined of (*a*) and (*b*). We must, when thinking of alimentary toxæmia, bear in mind that the culture medium itself is as important as the bacteria, and therefore alterations of diet may influence the production of intestinal poisons as completely as bacteria themselves. A good instance of this is the improvement that follows the withdrawal of carbohydrates in cases of carbohydrate dyspepsia.

Those who ascribe most to alimentary toxæmia are unable to tell us what the poisons are. Much work has been done on the excretion of indican and ethereal sulphates in the urine, and there is no doubt that an excess of indican is often associated with serious intestinal disturbance, but many persons pass large amounts of indican for many years and remain in good health; on the other hand, indican is not passed in many instances in which the patient might be thought to have alimentary toxæmia. It is generally allowed that the poison is not indol, indican, or ethereal sulphates. Indeed, just as we do not know what the poison is in uræmia or diabetic coma, so we do not know what it is in the illnesses ascribed to intestinal toxæmia, nor do we know for certain which are, in any case, the offending micro-organisms, nor do we understand the circumstances favouring their appearance and development, and unfortunately the circumstances cannot be exactly reproduced in the laboratory. Further, it would not necessarily follow that if, say by subcutaneous injection, certain symptoms were produced the same would follow when the poison was absorbed from the intestines; mercury when inhaled causes tremors, but not when taken by the mouth. Surely, all this being so, statements should be made cautiously, yet one reads that indol-forming organisms must be harmful because they are prominent, and many equally foolish arguments. Nevertheless, some very suggestive work has recently been done by Mellanby, Twort, and others, who have isolated creatin-destroying micro-organisms from the alimentary canal, and their experiments show that in the intestines of animals another bacilus forms β imidazolethylamine, which is a powerful poison, from histidine, but the process cannot take place in an acid medium. This poison is probably destroyed in the liver, and it is suggested may be a cause of cyclic vomiting. It would be very interesting to see if it is present in a piece of gut excised at an operation on the human subject. Bertrand and Berthelot have called the micro-organism B. aminophilus intestinalis.

But even if we knew all about the formation of the toxin and had identified it in the intestine our difficulties would not be at an end, for before it reached the general circulation it might be altered in its passage through the intestinal wall or in the liver. Indeed, it is possible that sometimes alimentary toxæmia may be a hepatic disease in which substances absorbed from the intestine in all human beings are so altered in the liver of some that they become poisonous, or abnormal bodies arriving at the liver may so alter it that it produces poisons. Anyhow, there is strong evidence that an important function of the liver is to protect us from poisons absorbed from the intestines, and that its efficient performance of this function depends upon carbohydrates. The difficulty is well illustrated by cirrhosis of the liver, which was formerly always ascribed to alcohol, but now we know that it occurs in some who do not take alcohol, it does not occur in some who do, nor in animals poisoned by alcohol, and it is a part of some diseases in which alcohol plays no part. Clearly some other substances than alcohol can set up the cirrhotic process, and probably under circumstances of which we know nothing alcohol can accelerate the formation of these substances, which may well come from the intestine, and if so, cirrhosis of the liver may be a form of alimentary toxæmia.

I am afraid our knowledge is not sufficient for us to argue that because certain processes go on in the intestine there must be a clinical condition to which the term intestinal toxæmia may be applied, but it does not follow that there are not assemblages of symptoms of which an alimentary toxæmia is such a likely cause that we may with reason assign them to this cause until some other cause is shown to exist. The best example of such an assemblage is that known as carbohydrate dyspepsia. An infant afflicted with this has pyrexia, it loses flesh, but its tissues gain in water, its abdomen is distended by the accumulation of gas in the bowel, it is pale, fretful, and sleeps badly, it is often sick and has diarrhœa, its stools contain green colouring matter and an excess of fatty acids, they irritate the skin round the anus leading to dermatitis. These symptoms may be produced in a previously healthy child if an excess of carbohydrate is given, and will pass away if that excess is withheld. I would suggest that these are the cases of intestinal toxæmia that should be first studied, for in them we see the problem at its simplest, the illness being induced by a single simple article of food. As this is carbohydrate and the intestines are distended with gas there is every probability that excessive fermentation accompanies the formation of some poison which is capable of causing pyrexia; indeed, much older children often suffer from attacks of pyrexia which may be prevented by abstention from carbohydrates. Enterogenous cyanosis is a form of intestinal toxæmia from which we might learn much if it were commoner, for we know that in the methæmoglobinæmia variety there is a nitrite in the blood probably derived from some abnormal intestinal process, and that in the sulphæmoglobinæmia variety hydrogen sulphide is concerned with the production of the disorder, and as the cyanosis has disappeared when the accompanying constipation has been overcome there is every probability that the complaint is really an example of alimentary toxæmia. As nitrites and hydrogen sulphide are simple chemical bodies it is particularly disappointing that we can discover nothing about the abnormal intestinal processes at the bottom of enterogenous cyanosis, and this should make us particularly careful of dogmatising when we do not even know what the poisons are. Certainly, sufferers from enterogenous cyanosis have not the symptoms which it is the fashion now to assign to alimentary toxæmia.

Lately it has been urged with much insistence that many suffer from ill-health due to absorption of poisons from the bowel which are formed there because the bowel is imperfectly emptied, or in the modern terminology these patients are said to have intestinal toxæmia due to intestinal stasis. That such is the case is very likely. Most people feel miserable if their bowels are not open for some time. Advertisements of medicines designed to keep the bowels open assail us all over the world, many health resorts flourish exceedingly because their natural waters are aperient, colossal fortunes have been made out of the sale of purgatives, and the pharmacopœia contains more examples of the aperient than of any other class of drugs, and the

improvement in health that follows keeping the bowels properly open is often so striking that, from the clinical point of view, there is strong evidence that we may suppose such an alimentary toxæmia secondary to intestinal stasis, although we are unable to indicate the poison or say how it is formed. But it must never be forgotten that individuals vary exceedingly about their bowels; some are perfectly well if the bowels are only open once a week; presumably if intestinal stasis is an important factor in causing alimentary toxæmia these persons do not readily form poisons, or, if they do, they are immune to them. It has, however, been stated recently that the results of chronic alimentary toxæmia are much more numerous than was previously thought, and that the cause of the failure to empty the bowel is frequently mechanical and has been often overlooked.

To take the last point first. It is not necessary for the production of alimentary toxæmia that there should be any mechanical obstruction to the passage of the contents of the bowel. If the poisons are bacterial the quantity of them produced will depend upon the number of micro-organisms and the suitability of the medium for their growth which, for example, might be so favourable that toxæmia would result without any stasis; therefore, toxæmia is not proof of stasis. Those who attach great importance to mechanical stasis differ much among themselves as to its cause. Some attribute it to excessively large valves of Houston, some to pericolitis, some to dropping of the colon, some to adhesions around the ascending colon, some to spur formations at the hepatic and splenic flexures, some to abnormal mobility of the cæcum, although others say that the mobility of the cæcum thought to be abnormal is normal, and some to the development of various bands and abnormal mesenteries that drag the bowel and kink it, but the reasons given for thinking that these bends are evolutionary are by no means convincing; most observers regard them as inflammatory. We have no sufficiently large number of cases proving that any of these conditions are more common in those supposed to be suffering from intestinal toxæmia than in those who are not, and it is strange that when the bowels are, by chronic peritonitis, matted into one mass, so that there must be many abnormal kinks and great interference to peristalsis must exist, yet the symptoms said to be indicative of alimentary toxæmia are not constantly present, and even intestinal obstruction is rare. Although it may be that some of these mechanical causes lead to alimentary toxæmia the matter cannot be regarded as proved, and it must be remembered that the co-existence of two phenomena does not prove that they stand in the relation of cause and effect—they may have a common cause; indeed, it is possible that the abnormal bands and the toxæmia are induced by the same cause. Much investigation with X rays has been performed upon those thought to be suffering from alimentary toxæmia, and there is no doubt that the X rays have added, and will add, enormously to our knowledge of intestinal movements, both normal and abnormal, but we must bear in mind that although X rays may show a kink they cannot show the cause of the kink; that if large amounts of such a heavy substance as bismuth are used the bowels can hardly be said to be acting normally; that we ought to be provided with dozens of X ray pictures of dozens of healthy persons taking the same amount of bismuth; and that when we look upon a screen we only see a plane picture. All inferences from X ray examinations as to whether the duodenum or any other part of the bowel is dilated must be received with caution, for the rays from the X ray tube are divergent; we are dealing with a plane picture, and usually the statement is made that the duodenum, for example, is dilated without stating its size or that of the normal duodenum.

We may now turn to the symptoms which these sufferers from alimentary toxæmia are said to show. There is no need to detail them, for they have been recently described over and over again in the medical press. I am one of those who think it probable that they are due to alimentary toxæmia, but the poison has never been found, the symptoms have never been produced experimentally, few observers have up to the present even given an opinion on the matter, and in their extreme degree these symptoms are in my experience decidedly rare; yet we find it definitely stated time after time that these symptoms are due to alimentary toxæmia, but I submit that the evidence does not amount to proof, although it renders such a suggestion probable. If we are not careful we shall, before we know where we are, be invoking the aid of alimentary toxæmia in the same reprehensibly loose way as gout, uric acid diathesis, and congestion of the liver have been called in to explain various vague symptoms which we do not understand.

So many conditions which cannot be called symptoms have been ascribed to intestinal stasis, and consequent alimentary toxæmia, that they cannot all be examined now, but every one of them needs more careful scrutiny than it has received. Cystic disease of the breast, cancer of many parts, and duodenal ulcer, for example, have been set down to intestinal stasis, but it has not been shown that among a large number of sufferers from any one of these intestinal stasis is more common than among those in whom these conditions are not present. Then, intestinal stasis is commoner in women, duodenal ulcer in men, yet the first is said to cause the second. This casts so much doubt on the correctness of this suggested etiology that if there are special circumstances which can dispel the doubt they ought to be so convincingly stated that their adequacy is accepted by all. Nor have any of these conditions been induced in animals by artificially induced stasis. Then again we read that the "so called Bright's disease is merely a product of intestinal stasis." There are many varieties of Bright's disease; which is meant? That being settled, let it be shown that a considerable proportion of those suffering from that variety of Bright's disease have alimentary toxæmia. This has not yet been done. Again, I see it suggested that curing alimentary toxæmia cured a case of exopthalmic goitre; no such conclusion can be drawn from a single case, for exophthalmic goitre is a disease which tends to get well, especially if the patient rests, and this patient rested in bed during her operation for intestinal stasis. A woman suffering from exophthalmic goitre was admitted under me with typhoid fever; when she was discharged her exophthalmic goitre was cured. This does not show any relationship between typhoid fever and exophthalmic goitre, which was probably cured by the rest in bed.

If it is allowed that ill-health is due to alimentary toxæmia caused by bacterial changes the best treatment would be to stop the ingestion of the offending bacteria, but as we do not know what they are we cannot do this; or to give intestinal antiseptics, which experience has shown to be of limited use, although I think their uselessness has been exaggerated, for occasionally cyllin seems to do good; or to alter the medium in which the bacteria grow, which is successful when we cure children by diminishing their carbohydrate; or to give other micro-organisms which will render difficult the growth of the offending micro-organism (this is the principle of the sour-milk cure, from which much was hoped, but which has been disappointing); or if there is delay in emptying the intestine to overcome this.

The last is the commonest mode of treatment, and thousands of people keep themselves in good health by natural aperient waters or some other simple aperient, either food or drug. Abdominal exercises and massage will, if properly carried out, cure many a case of constipation which has resisted all other methods, and the same may be said of a visit to a hydropathic institution or a spa which lays itself out for the treatment of this disorder. Lately some surgeons have been trying to limit the formation of poisons in the intestines by preventing delay by performing an ileo-sigmoidostomy either with or without excision of the colon. When these cases are reported we are always assured that all medical means has been adopted without benefit, but we are never told what the medical means were. It would add greatly to our knowledge if our surgical friends would give precise details of the medical treatment, the patient's statements being corroborated by the various medical men who treated her. A suspicion comes into one's mind sometimes that perhaps some surgeons do not know all the means the physician has at his command for the treatment of delayed action of the bowels. Some have opened the appendix and washed the bowel through from the appendix to the anus; if the stasis is in the small intestine this operation will not be of much use, but the success which may follow it when performed for colitis is so brilliant that when the stasis is in the large bowel much benefit might be expected. One thing is certain—namely, that if surgical interference is ever necessary the patient for whom it is necessary is a reproach to her medical advisers, if she has consulted any in the early period of her illness, for the condition never ought to be allowed to advance to the stage which requires surgery, and although no other operations may be feasible, yet

short-circuiting and opening the appendix are only makeshifts, for neither removes the cause of the intestinal stasis.

It is too early to speak definitely as to the results of these short-circuiting operations. Occasionally the operation itself is fatal. I, like some others, have seen some women who are not in the least better for having had it done; on the other hand, many successes have been reported, but sometimes more than one operation has been required, and sometimes aperients are still necessary after the operation. It would be a good thing if some of these cases were more fully reported; photographs before and a year after the operation would be useful, and the patients who had been operated on, whether successfully or not, might be shown before this society. It is desirable to have the after-history of every case that has ever undergone operation, for it may be that any improvement that ensues is not permanent; this is especially important, as many of the subjects of operation are neurotic women, and we all know that the immediate effects of operation on them may be extraordinary. Further, it is unfortunate that the most frequent symptom—namely, pain—is subjective.

In this brief survey I have tried to indicate the direction which future work should take. I hope I have not been too critical; if any think so I would beg them to remember that friendly criticism can do no harm. Our interest in alimentary toxæmia has been awakened by the fascinating suggestions of Metchnikoff and by the bold extension of them by Mr. Arbuthnot Lane, but it is an approved principle of science that the results of one worker cannot be accepted until confirmed by others. We ought, therefore, to withhold our verdict on many points until we see whether confirmation is forthcoming. In the year 600 A.D. Isidorus Hispalensis, Bishop of Seville, wrote: "For a medical man should know the *ars rhetorica*, that he may be able to support with sound arguments the matters which he deals with; and also the *ars dialectica*, so that by the exercise of reason he may investigate the causes of sickness for the purposes of cure." That is true now as then.

Wimpole-street, W.

THE ETIOLOGY OF CYSTS CONNECTED WITH HERNIA SACS.

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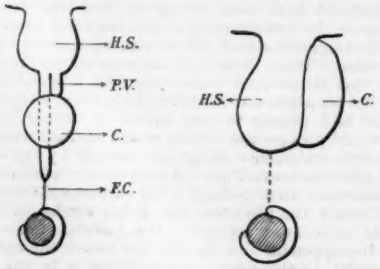
ANY surgeon who has had occasion to perform a large number of operations for the radical cure of inguinal hernia must, from time to time, have met with anomalous conditions of the sac and its connexions which are difficult to explain. This has been my experience, and I will exemplify my meaning by referring to two cases, and at the same time venture to offer an explanation of the state of affairs found at the operation.

In Case 1 the patient was a young man suffering with a "hydrocele of the cord." At the operation a small hernia sac was found, and connected with the fundus of the sac



H.S., Hernia sac. P.V., Processus vaginalis (duplicated). C., Cyst. F.C., Fibrous cord.

was the peculiar and complicated condition depicted in the accompanying diagram. Attached to the fundus of the hernia sac were two patent funicular processes, each of which opened into the sac. At the blind end of the shorter process was a tense cyst, one inch in length, which contained clear fluid. The longer process had a uniform lumen and passed downwards behind the cyst, to which it was intimately adherent. The lower end of this process was connected with the tunica vaginalis by a fibrous cord, so that it undoubtedly was the remains of the true processus vaginalis testis.

Case 2 was that of an adult male, who was admitted to hospital for the cure of a scrotal hernia which had existed for many years and could not be reduced satisfactorily. At the operation a large cyst, which contained clear fluid, was found lying upon and intimately adherent to the anterior surface of the sac wall. The relative size and relation of the cyst to the hernia sac are illustrated in the diagram.

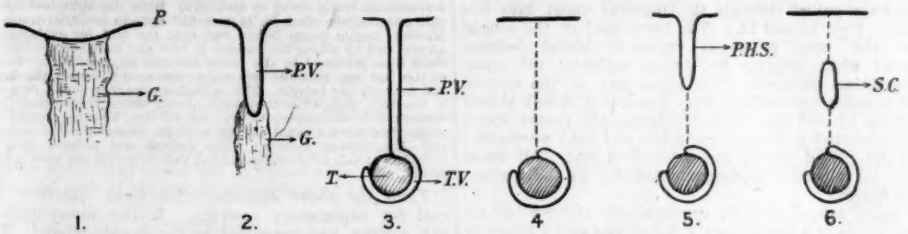
Though the origin of the cysts in these two cases may, at first sight, appear to have nothing in common and be difficult to account for, their presence can, I believe, be readily explained on the views advanced many years ago by Mr. C. B. Lockwood regarding the etiology of infantile hernia. Mr. Lockwood pointed out that if the processus vaginalis is drawn down by the gubernaculum, a second sac of peritoneum might be produced by the traction of some additional fibres at the gubernaculum in a manner entirely analogous to that which produced the processus vaginalis testis.

It is a well-known fact that the obliteration of the processus vaginalis is frequently imperfect, and often takes place in an irregular manner. The most common defect is for the upper part of this process to remain patent, thus forming a potential hernia sac. The whole of this process may remain pervious, or the upper and lower ends become obliterated, resulting in a cystic distension of the unobliterated part. Many other irregularities have been observed, but I merely wish to emphasise the fact that obliteration may occur at any point in the whole length of this process, from the tunica vaginalis to the internal abdominal ring. In Figs. 1 to 6 I have represented diagrammatically how the tunica vaginalis is formed, together with some of the more common developmental defects.

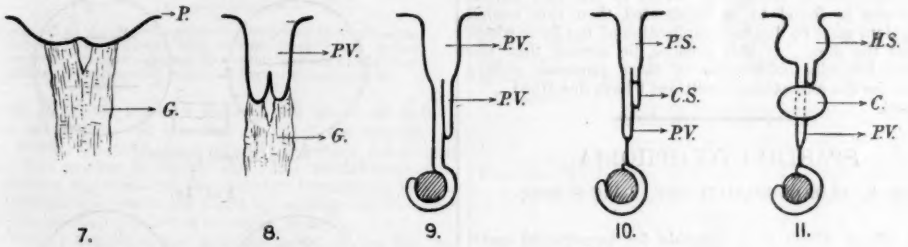
Bearing these facts in mind, let us see how the anomalous condition found in the two cases I have mentioned can be accounted for. The chief difficulty in the first case is to account for the presence of two funicular processes attached to the fundus of a hernial sac. It is generally acknowledged that the gubernaculum is in some way responsible for the normal descent of a process of peritoneum to the bottom of the scrotum in order to form the tunica vaginalis. Whether this portion of the peritoneum is pulled down by or merely guided by the gubernaculum I do not know, though one would expect a muscular structure to pull rather than guide. As the gubernaculum is responsible for the formation of one funicular process, it is reasonable to suppose that if this process is duplicated the gubernaculum must have something to do with it. I know of no other structure which could perform a similar function.

In the case we are now considering (Case 1) I would suggest that the peritoneal attachment of the gubernaculum was bifurcated, and as a consequence two peritoneal processes instead of a single one had been pulled through the inguinal canal towards the scrotum. (See Figs. 7 and 8.) It should be noticed that the duplication of the funicular process is not complete; that is to say, the division does not extend up to the level of the internal abdominal ring. Both processes open into a larger diverticulum. (Fig. 9.) As the duplication is not complete it is probable that the peritoneal attachments of the gubernaculum were not widely separated, and its contraction caused the funicular process of peritoneum to have two nipple-like terminations. The subsequent changes are not so difficult to account for, and are depicted in Figs. 9 to 11. The longer process, after forming the tunica vaginalis, became obliterated at its lower part into a fibrous cord, the upper part remaining pervious. The shorter process became obliterated about its middle, thus forming a closed serous sac below, and remained pervious above. (Fig. 10.) The bowel descended into the large single diverticulum into which both these processes opened, thus converting it into a hernia sac, and fluid accumulating in the closed serous sac a cyst was formed. (Fig. 11.)

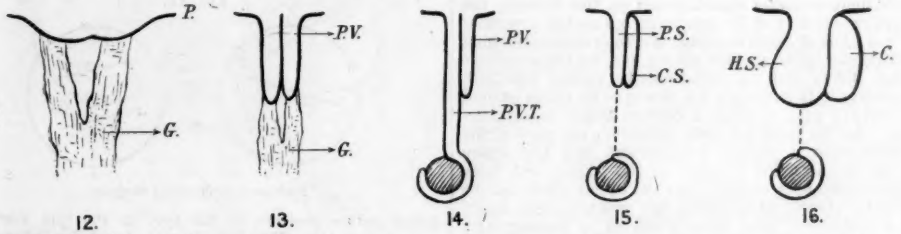
In my other case (Case 2) I believe the developmental irregularities were very similar to those I have just described. In this case, however, I would draw attention to the fact that the duplication of the processus vaginalis was more complete, extending up to the level of the internal abdominal ring. This I would account for by supposing that the upper



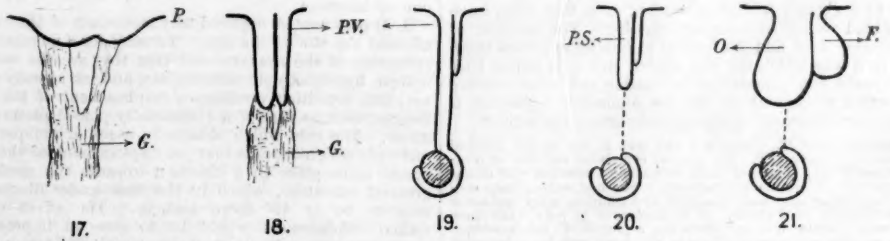
Figs. 1 to 4 represent the normal development of the tunica vaginalis. In Figs. 5 and 6 a portion of the processus vaginalis testis remains unobliterated, thus forming a potential hernia sac in one case and a "hydrocele of the cord" in the other. G., Gubernaculum. P., Peritoneum. P.V., Processus vaginalis. T., Testis. T.V., Tunica vaginalis. P.H.S., Potential hernia sac. S.C., Serous cyst of cord.



Double attachment of the gubernaculum to the peritoneum, and consequent partial duplication of the processus vaginalis. P.S., Potential hernia sac. C.S., Closed sac. H.S., Hernia sac. C., Cyst.



Wide double attachment of the gubernaculum to the peritoneum and consequent complete duplication of the processus vaginalis.



Complete but unequal duplication of the processus vaginalis owing to the unequal division of the gubernaculum. The imperfect obliteration of these processes results in the formation of two sacs (Case 3). O., Contained omentum. F., Contained a little fluid.

end of the gubernaculum was bifurcated, but the peritoneal attachments were more widely apart than in the other case; consequently two complete and separate processes of peritoneum were pulled through the inguinal canal into the scrotum. (Figs. 12 and 13.) The lower half of the longer process (the true processus vaginalis testis) became obliterated after forming the tunica vaginalis, the upper half remaining pervious. The upper part of the shorter process became obliterated, thus forming a closed serous sac. (Figs. 14 and 15.) Bowel entering the patent diverticulum converted it into a hernia sac, and fluid accumulating in the closed serous sac made it a cyst. All these changes are represented diagrammatically in the accompanying figures.

Two years ago, during an operation for the cure of an inguinal hernia in a young man I found two sacs intimately attached one to the other. The larger sac contained adherent omentum, the other, which was much smaller, contained only a little fluid. (Case 3, Figs. 17 to 21.) In this case an explanation similar to that I have advanced would also account for this developmental irregularity.

In conclusion, I would submit that as the gubernaculum is undoubtedly responsible for the presence of the peritoneal diverticulum known as the processus vaginalis testis, circumstantial evidence is strongly in favour of the view that if this process is found to be duplicated then this second diverticulum must be due to a duplication of the force which produced the first. If this premise be correct then the subsequent irregular obliteration of these processes clearly accounts for the anomalous conditions I have described.

Liverpool.

SPASTIC CYCLOPHORIA.

BY A. ALISON BRADBURNE, F.R.C.S. EDIN.

THE effects which it is possible for uncorrected small degrees of astigmatism to produce have within recent years become fully realised by the general body of practitioners, but little account is taken of the effect produced by astigmatism when it happens to be obliquely situated.

Astigmatism when either at 90° or 180° produces blurring of vertical or horizontal lines which can be corrected by ciliary action or may even be passed over and compensated for by mental correction. When, however, it happens to lie obliquely there becomes superimposed on the blurring the distortion or obliquity of the originally horizontal or vertical line. Thus a line of words on a page in a book becomes sloping or a rectangular figure appears oblong and its angles obtuse or acute. Before such an object can be viewed with both eyes correctly it is necessary for the eyes to rotate around a fore-and-aft axis to form a correct single mental impression. As the need for such action on the part of the eyes arises from a mental requirement and the centre governing its correction belongs to the higher and more specialised ones, it is obvious that the effects which can be produced by oblique astigmatism are greater, more exacting, and profounder than those produced by rectangularly placed errors.

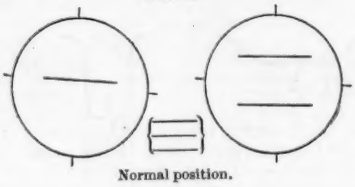
It is not uncommon to meet with cases of long-standing neurasthenia, of unassignable cause, completely cured by simple correction of a small degree of oblique astigmatism. It is advisable in all cases of nervous debility to exclude the possibility of such a condition, even with the history of having had the eyes tested, as not only may it have been overlooked, but an oblique astigmatism may have supervened owing to a change in the refraction, or it may even have been added owing to incorrect glassing. The account of the following case and its critical examination proves these points in a way which but few afford, and it is hoped that it will assist the elucidation of similar and more obscure cases which at present are far too commonly neglected, if not aggravated through ignorance concerning the subject.

The patient, aged 32, unmarried, was sent to me by her medical attendant in October, 1910. Her general complaint was one of poorness of nerve tone, together with occasional headaches and ocular strain, but not of any marked intensity. She had worn glasses constantly for over a year, which, though at first affording relief, had never been particularly comfortable. It is important to note what these glasses were. In the right eye there was a plus 0·5 D. sph. combined with a myopic cylinder of 1 D. axis 30° down and in. In front of the left eye was a plus 0·25 D. sph. combined with a plus cylinder at axis 30° down and out—that is to say, the glasses made the right eye one of mixed oblique, and the left eye one of hypermetropic oblique astigmatism. Now refraction and testing proved both eyes were in reality the subject of oblique hypermetropic astigmatism, of amount of 0·5 D. at axis 45° down and in in each eye, both axis and amount being equal in each eye. With the cylinders correcting this astigmatism—that is, at axis 45° out—in the trial frame and a Maddox double prism before one eye, the test for cyclophoria was carried out by asking the patient to view and state the position of the three lines produced by the prism and the unglassed eye. The result of the test was that the centre line was seen to be sloping down and out towards the temple. The cylinders were then slowly rotated, and it was seen that when they were moved nearer the vertical—that is, towards 90°—the sloping of the central line became greater, whilst when they were rotated in the opposite direction—that is, towards 180°—the sloping lessened. The patient was ordered plus 0·5 D. cylinders at axis 45° down and out in each eye with the most gratifying result.

From the above account arise three questions which call for explanatory answers. 1. The interpretation of the sloping line presented by the double prism? 2. The reason for the alteration produced on the central line by moving the cylinders? 3. The cause for the anomalous position of the eyes?

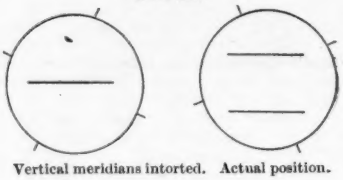
1. In regard to the first question, the meaning of the sloping of the central line. Here, although the line appeared to slope, it could not but be associated with a

FIG. 1.



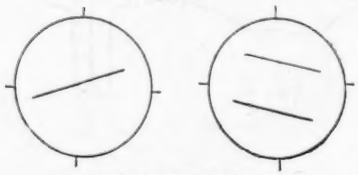
Normal position.

FIG. 1A.



Vertical meridians intorted. Actual position.

FIG. 1B.



Position as believed by observer.

defect in the position of the eye, as the line itself was truly horizontal. This line, it was stated by the patient, sloped down and out towards the temple. Remembering the fact that the line is really horizontal, such a slope could only be imagined by the line falling on an eye which was rotated inwards towards the nose, and its false interpretation arises because the patient imagines her eye to be horizontal, and therefore ascribes the tilt to the line and not to her eye. The true position of the eyes, then, was one of intortion.

2. It may now be inquired why movement of the cylinders affected the tilt of the line. Turning for a moment to the refraction of the eyes, we find that they are the subject of oblique hypermetropic astigmatism, and, as already pointed out, this condition produces a displacement of the retinal images, such as that of a horizontally placed picture of an arrow. The rule which obtains in cases of oblique hypermetropic astigmatism is that the displacement of the retinal image takes place in a direction towards the meridian of greatest curvature, which in the case under discussion is seen to be at 45° down and in. The effect of such retinal displacement would be to give an impression of crossed or scissor-like appearance which the fusion faculty would not tolerate, and would make a call on the centre

controlling the binocular rotation to correct, by extorting or turning templeward the vertical upper extremity of each eye. This is made clear by reference to Fig. 2. When the correct cylinders are properly placed the distortion at once disappears, and the removal of any need for binocular compensatory torsion accounts for the relief obtained.

To proceed with an inquiry into the reason for the effect of movement of the cylinders. If we rotate a convex cylinder whilst looking at a horizontal line we shall notice that within certain limits the line is moved in the same direction as we move the cylinder. It has already been shown that in the case under consideration the horizontal meridians are sloping down and in towards the nose, hence it is plain that if we rotate the cylinders inwards—i.e,

FIG. 2.

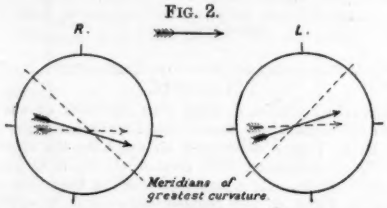
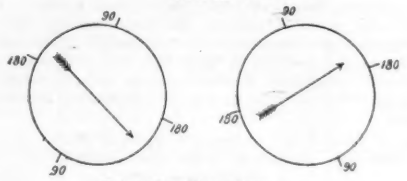


Image of an arrow undergoing torsion owing to uncorrected oblique hypermetropic astigmatism. Such would, unless corrected by binocular extortion, tend to form a crossed or scissor-like appearance instead of that of a single arrow.

towards 180°—we shall be moving the image of a horizontal line towards the direction in which the eyes lie; in other words, we shall be apparently lessening the sloping of the line as seen by the patient. In a similar manner we can see how movement of the cylinders towards the vertical will apparently increase the slope by moving the line away from the intorted position of the eye. (See Fig. 3.)

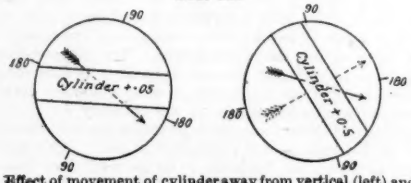
3. Having explained the positions asked in the first two questions, it only remains to account for the intorted position, and the reason is solely attributable to the faulty right glass. The left glass is, it will be noticed, but

FIG. 3.



Intorted position of eyes.

FIG. 3A.

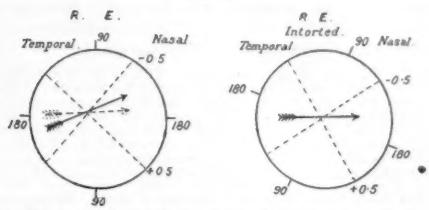


Effect of movement of cylinder away from vertical (left) and towards vertical (right).

slightly incorrect, and not sufficiently so to adversely affect one way or the other any torsion of this eye. Further, the fact that it was intorted at all arises from the urgent necessity for intortion which the right eye called upon the binocular centre which became expressed on both eyes.

It has already been pointed out that the glasses ordered had converted the right eye into one of mixed oblique astigmatism in which the myopic meridian was placed at 60° down and out. The rule of distortion for cases of oblique mixed astigmatism is that displacement of a horizontal line takes place towards the myopic meridian. Therefore in this case the image of a horizontally placed arrow (see Fig. 4) would be displaced downwards and outwards. Before this would correspond with the image in the fellow eye the eye would have to rotate nasalwards. This constant call for an intortional action would in time lead to fixed tendency of intortion—that is, a condition of spasm of intortion—and the continuance of the call

FIG. 4.



The displacement effect due to faulty glass before R. E. making it the subject of oblique mixed astigmatism and the manner of its correction by forced intortion.

upon the nervous energy would account for the neurasthenic symptoms complained of.

Thus are explained the position of the eyes, the reason why such existed, and how it was brought about. Its rectification in this case was extremely simple and its solution no less so; yet it is, unfortunately, not the case in very many of the instances one meets with in which the presence of a cylinder in one eye affects the torsional movements of its fellow.

Manchester.

ON THE TREATMENT OF

CARBUNCLES, BOILS, STAPHYLOCOCCIC INFECTIONS, AND CERTAIN STREPTOCOCCIC INFECTIONS

BY THE INTERNAL ADMINISTRATION OF LARGE DOSES OF DILUTE SULPHURIC ACID B.P.

BY JOHN REYNOLDS, M.D. BRUX., M.R.C.S. ENG.,
AND
RUSSELL J. REYNOLDS, M.B., B.S. LOND.,
M.R.C.S. ENG.

IN response to the wish expressed in the concluding paragraph of Mr. F. S. D. Hogg's letter in THE LANCET of Feb. 22nd (p. 562) we have pleasure in sending for publication results obtained by the administration of acid. sulph. dil. B.P. in cases of staphylococcic and some streptococcic infections. It must be clearly understood that this article only deals with the clinical side of the subject, as this aspect presented itself to us first. As regards the experimental investigation, we may say that it is now being followed up, and it may be dealt with in a further communication. We have used this remedy in such cases as those set forth below for many years with uniform success. From letters we have received from medical men in different parts of the country it appears that they have experienced the same satisfactory results.

As will be seen, the treatment consists in administering internally dilute sulphuric acid B.P. in 20 or 30-minim doses, each dose diluted with 2 oz. of water, every four hours.

In the case of carbuncle treated by this drug in large doses (small doses are not of the slightest use), changes are observed to take place in the following order. First, within 24 hours the infiltrated area of tissue becomes strictly circumscribed; then the slough is observed to soften; during the next few days pus is freely discharged, and the whole affected area shrinks and healthy granulation tissue forms, filling up the cavity until the part is healed. The cicatrisation takes place in a comparatively short time from the commencement of the treatment, the period varying, of course, with the size of the lesion.

The only external application is a dressing of carbolised vaseline (1 in 20).

Naturally in cases of what would appear to be streptococcic infection, such as those resulting from abrasions, or

punctures by bones of high game, or inoculation by decomposing animal matter, the patient showing early symptoms of septicæmia, a somewhat different though favourable course obtains; the high temperature is quickly reduced and the pain and swelling and malaise gradually subside, the patient progressing uninterruptedly towards convalescence. Where the lymphatics are inflamed and the glands enlarged and painful these conditions in a few days also disappear.

The following cases are taken from our notes:—

CASE 1.—The patient, aged 49 years, while away on a holiday in Wales, developed a very small painful spot on the left side of the back of the neck, just at the posterior edge of the sterno-mastoid, which was thought at the time to be due to a mosquito bite or sting. This spot rapidly increased in size during the succeeding four days until it resulted in a carbuncle. The patient then returned to London by order of the local medical attendant, and came under our care. We at once administered acid. sulph. dil. in 20-minim doses diluted with a wineglassful of water; this was continued every four hours and the carbuncle dressed with carbolised vaseline (1 in 20). No other treatment was used, and in 19 days from the commencement of the treatment the patient was absolutely well.

CASE 2.—The patient, aged 29 years, apparently in a healthy condition, accidentally pricked the index finger of the right hand on Oct. 9th, 1911, whilst dressing a rabbit which was seemingly in a perfectly fresh state, and which was afterwards eaten by the family for dinner. On the evening of the same day the finger began to throb and grew painful, and during the night the pain continued and kept the patient awake. All the next day and night it was poulticed. The patient now began to feel ill, and the swelling and pain extended to the elbow. On the 11th, two days after the puncture and just before we took the case in hand, a severe rigor had occurred. On visiting her the temperature was found to be 104·5° F., and the patient seemed very weak and ill; the whole forearm and hand were extremely swollen and painful, red lines marking the course of the lymphatics as far as the elbow, with swollen glands and also some tenderness and swelling in the axilla. We at once administered 20-minim doses of the acid. sulph. dil. B.P. in a wineglassful of water, and the dose was repeated every four hours through that day and the following night. On the morning of the 12th the temperature had fallen to 102° and the pain was much less. The doses were continued with strict regularity every four hours, and on the morning of the 13th the temperature had fallen to 100°, the pain was still less, and there was a considerable diminution of the swelling. This treatment was continued, and on the 14th the temperature was normal, the swelling and pain had subsided, and only a little stiffness remained, and this also subsided on the 17th, when we left her well. As regards outward application, the whole arm and hand were simply wrapped in cotton-wool and supported in a broad sling.

CASE 3.—The patient, aged 43 years, had pricked the index finger of her right hand while drawing a "high" partridge. Four or five days had elapsed before the case was seen by us, when the whole hand and arm right up to the shoulder was found to be œdematous, livid in colour, and intensely painful. There was a high temperature—104° F.—and great restlessness and depression. The patient was sent to bed, but could not sleep on account of intense pain. The limb was wrapped in cotton-wool and carefully supported on pillows, and acid. sulph. dil. was given in 30-minim doses every four hours. Within 20 hours or so (by the time the patient was seen next day) the pain began to subside and the temperature to fall, and at the end of the fourth day of treatment the swelling began also to lessen, and the patient continued to improve steadily until at the end of three weeks she was convalescent as far as the arm was concerned, but the treatment was continued in 20-minim doses with a little quinine sulphate (2 grains) for a further week, when the patient was then in her normal state of health.

CASE 4.—The patient, aged 45 years, a short, thick-set, plethoric man, a gross eater accustomed to take plenty of beer and stimulants generally, but who took also plenty of violent outdoor exercise—e.g., sports—came under treatment on May 16th on account of a tense and diffuse red swelling of the left upper lip and left ala of the nose, and extending to the left eye, the lids of which were very swollen and quite closed. He said it was extremely painful, and he attributed it to poisoning by an insect. On examination there were seen to be three small apertures disclosing a hard grey slough, such as one gets in carbuncles. The temperature was high when he was first seen. This patient was at once sent to bed and put on the acid. sulph. dil. treatment (in this case 30 minims in a wineglassful of water every four hours), and after the first 24 hours the spread of the inflammation was arrested and the grey slough in each aperture began to soften down into pus which discharged itself in increasing quantity through the three openings, and the swelling began to subside; the temperature went steadily down, and on June 10th—i.e., in 25 days—the patient was quite well. The only other remedy applied was carbolised vaseline (1 in 20) on lint as a dressing. For at least the first 10 days the patient was only allowed light diet, and as an aperient magnesium sulphate was given in drachm doses in 10 oz. of water fasting.

We have treated in the same way in the past a very large number of similar, as well as of milder, cases—e.g., blind boils, which are aborted and completely disappear. Recurrent crops of boils and pimples in different parts of the body and severe cases of acne have yielded readily. In one case in particular, where the patient developed recurrent crops of boils, the drinking water was found to be taken from a very foul cistern with dead animal and vegetable matter covering the bottom.

This remedy proving so effectual in such classes of cases as we have mentioned, we were naturally led to try its effect on other conditions where pyogenic organisms were responsible for some of the symptoms observed. Cases of bronchiectasis and pulmonary tuberculosis, where there is so often a staphylococcic infection, we have found to be benefited; the sputum becomes less purulent and much less in quantity, and in tuberculous cases the fluctuations of temperature are less.

From the above it seems evident that this remedy has a wide sphere of usefulness, and experiment and observation alone will show in the future how far the many lesions caused by pyogenic organisms can be successfully treated in this way.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

BY NOEL DEAN BARDSWELL, M.D. EDIN., M.R.C.P. LOND. & EDIN.,

MEDICAL SUPERINTENDENT OF THE KING EDWARD VII. SANATORIUM, MIDHURST, SUSSEX.

II.[1]—A PRELIMINARY NOTE ON TREATMENT WITH TUBERCULIN.

IN my previous article, dealing with the work of the King Edward VII. Sanatorium during the four years July, 1907, to July, 1911, I have attempted to estimate the degree of success which attended the treatment of 1030 patients during this period. As a means of testing the value of the treatment in force at the Sanatorium during this period—a period during which tuberculin was not used—I considered two factors only—namely, (1) the disappearance or non-disappearance of tubercle bacilli from the sputum; and (2) the condition of the patients treated, on successive anniversaries of their discharge from the Sanatorium up to the present date. I emphasised the fact that information on these two heads gives us undisputable evidence as to the immediate and permanent value of any method of treatment of pulmonary tuberculosis. Admittedly, there are factors in addition to the two I have selected which furnish us with evidence as to the value of various forms of treatment, such as, for instance, variation in physical signs, general well-being, capacity for work, &c. However, in a preliminary notice such as this there is no scope for taking a large survey of the subject. I shall, then, follow as closely as possible the lines of my first paper.

For the evidence of after-histories, the ultimate test for any treatment, we must wait for a year or two. There remains the valuable test of efficiency—namely, the disappearance or persistence of tubercle bacilli in the sputum. We are now in a position to apply this test and to compare the value of sanatorium treatment alone and of sanatorium treatment with tuberculin as a means of clearing the sputum of bacilli.

Method of Examining the Sputum employed by Dr. J. A. D. Radcliffe, Pathologist at the King Edward VII. Sanatorium.

The sputum coughed up immediately on waking is received into a sterilised Petri dish. These Petri dishes, before being used a second time, are, after being washed and sterilised, filled with concentrated sulphuric acid for 24 hours and again washed. New slides and cover-slips are invariably used for all examinations. The risk of fallacy arising from imperfectly cleaned apparatus is thus reduced to a minimum. From the specimen of sputum thus obtained films are prepared and stained in the ordinary way. If the examinations of these films prove negative the sedimentation method of Ellermann and Erlandsen is used. This method has been found by Dr. Radcliffe to be more efficient than the antiformin method. Should this sedimentation method give a negative result further sputum examinations are made in the same way for three or four weeks, and, subsequently, once a month, until the patient is discharged.

Disappearance of Tubercle Bacilli on Sanatorium Treatment Alone, and on Sanatorium Treatment with Tuberculin.

In making a comparison between the tuberculin-treated and the non-tuberculin-treated cases there is one source of fallacy which must be taken into consideration—namely, that of varying length of treatment. It is clearly unsatisfactory to compare a case treated for eight weeks with another who was treated for 40 weeks or more. To get over this difficulty I have subdivided my three clinical groups into subdivisions depending upon the number of weeks'

[1] Article I. was published in THE LANCET of March 8th, 1913, p. 679.

treatment the several patients received in the Sanatorium. As a matter of fact, with the data now under notice, this fallacy of variation in length of treatment is a small one, the duration of treatment of both series of patients having been very similar. In all other respects—clinical condition, general lines of treatment, &c.—the two sets of patients are exactly comparable.

The sputum records of the tuberculin-treated and the non-tuberculin-treated patients are shown in the following tables:—

TABLE I.—*Sputum Records of 110 Consecutive Patients Treated with Sanatorium Treatment + Tuberculin.*

No. of weeks under treatment.	Group I.			Group II.			Group III.		
	No. of cases.	Lost T.B.	Did not lose T.B.	No. of cases.	Lost T.B.	Did not lose T.B.	No. of cases.	Lost T.B.	Did not lose T.B.
Under 10 weeks	5	3	2	11	1	10	4	—	4
10–15 ,,	5	2	3	11	2	9	2	—	2
15–20 ,,	5	5	—	14	9	5	6	—	6
20–25 ,,	4	2	2	12	2	10	6	—	6
25–30 ,,	1	1	—	10	5	5	—	—	—
30–35 ,,	—	—	—	4	2	2	1	—	1
35–40 ,,	—	—	—	3	—	3	1	—	1
Over 40 ,,	1	1	—	3	2	1	1	—	1
Total ...	21	14	7	68	23	45	21	—	21

Summary, Irrespective of Length of Treatment.

—	Group I. 21 cases.	Group II. 68 cases.	Group III. 21 cases.	Total. 110 cases.
Lost tubercle bacilli	14=66·6%	23=33·8%	— 0%	37=34%
Did not lose tubercle bacilli	7=33·4%	45=66·2%	21=100%	73=66%

TABLE II.—*Sputum Records of 175 Consecutive Patients Treated with Sanatorium Treatment Alone.*

No. of weeks under treatment.	Group I.			Group II.			Group III.		
	No. of cases.	Lost T.B.	Did not lose T.B.	No. of cases.	Lost T.B.	Did not lose T.B.	No. of cases.	Lost T.B.	Did not lose T.B.
Under 10 weeks	8	4	4	17	4	13	16	—	16
10–15 ,,	13	8	5	22	2	20	12	1	11
15–20 ,,	8	3	5	15	4	11	10	1	9
20–25 ,,	5	4	1	15	1	14	2	—	2
25–30 ,,	4	1	3	12	3	9	6	1	5
30–35 ,,	2	—	2	7	1	6	—	—	—
35–40 ,,	—	—	—	1	—	1	—	—	—
Over 40 ,,	—	—	—	—	—	—	—	—	—
Total	40	20	20	89	15	74	46	3	43

Summary, Irrespective of Length of Treatment.

—	Group I. 40 cases.	Group II. 89 cases.	Group III. 46 cases.	Total. 175 cases.
Lost tubercle bacilli	20 = 50%	15 = 16·8%	3 = 6·5%	38 = 21·7%
Did not lose tubercle bacilli	20 = 50%	75 = 83·2%	43 = 94·5%	137 = 78·3%

From the above it will be seen that the evidence is distinctly in favour of the use of tuberculin. With the early cases (Group I.), the 50 per cent. of cases treated without tuberculin who lost their tubercle bacilli has been increased to 66·6 per cent. since tuberculin was added. With the moderately advanced cases (Group II.), the 16·8 per cent. treated without tuberculin who lost their tubercle bacilli has been increased to 33·8 per cent. by the addition of tuberculin. With the very advanced cases (Group III.) there is no difference between the tuberculin-treated and non-tuberculin-treated cases. This is as one would expect. Now and then a case of very advanced disease will lose its bacilli, but for the most part alleviation of symptoms and some prolongation of life is all that can be looked for in the way of improvement in any circumstances.

We are left, then, to draw what inferences we will from the fact that, according to our records worked out up to the present date, the addition of tuberculin to sanatorium treatment increases the chances of clearing the sputum of tubercle bacilli by some 16·6 per cent. in the case of patients suffering from early disease, and by some 17 per cent. in the case of patients suffering from the disease in its moderately advanced stages. This is a material gain, the significance of which is emphasised by the excellent after-history records of our patients who in past years lost their bacilli as the result of treatment. It may reasonably be anticipated that this increase in the number of patients who are now losing their bacilli will be associated with a corresponding improvement in the after-history returns of a few years hence.

It remains, of course, to be seen whether or not these, our first, results will be confirmed by further observations. On the face of it, however, the number of cases observed and compared—namely, 175 and 110 respectively—would seem to warrant the expectation that the records just given will be substantiated. I have purposely omitted from this short paper any expression of opinion as to the value of tuberculin treatment, the types of patients for whom it is best suited, the contra-indications, &c. These are questions for more detailed consideration. Inasmuch, however, as the data recorded in this paper are in themselves a recommendation for the use of tuberculin, and in view of the fact that the methods of tuberculin administration in everyday use vary so considerably, it is well to indicate, even though briefly, the lines of tuberculin treatment adopted in the King Edward VII. Sanatorium.

Brief Note as to Tuberculin Treatment at the King Edward VII. Sanatorium.

Variety of tuberculin used.—The preparations which have as yet been used most frequently are Koch's Albumose-free Tuberculin (A.F.) and Koch's Bacillary Emulsion (B.E.). Koch's Old Tuberculin (T.A.) and New Tuberculin (T.R.) have been used in a few cases.

Dosage.—The initial dosage given in the majority of cases is 0·0001 c.c. or 0·00001 c.c., the dose varying with the condition of the patient and the nature of the lesion. The dose is increased when the last dose given produced no marked general or focal reaction; otherwise the last dose is repeated until it no longer gives rise to such reaction. In increasing the doses the scheme generally followed is to give 0·1, 0·15, 0·2, 0·3, 0·5, 0·7 c.c. of each of the various dilutions of tuberculin used. The maximum dose given is 1 c.c. of undiluted tuberculin.

Interval between the doses.—When the higher dilutions are used an interval of two days between the doses is the general rule. With the lower dilutions and the pure preparations the interval is increased to seven days or more. The general condition of the patient and the nature and extent of the pulmonary disease are factors which have to be taken into consideration in determining the dose interval; in some cases, for example, the interval has to be increased on account of the occurrence of a reaction. Reactions are, as far as possible, avoided.

EAST SUSSEX HOSPITAL.—The working of the National Insurance Act seems to have had considerable effect upon the funds of the East Sussex Hospital at Hastings. "Notwithstanding the special appeals," says a note in the seventy-third annual report, "which have been made, the various heads of what may be called voluntary contributions show an almost universal decline, and although no doubt this may be attributed in great part to the popular prejudice aroused by the Insurance Act, the falling off cannot fail to cause some anxiety and disquietude among all those interested in the future welfare of the hospital." Special efforts are to be made to recover the lost ground, and also to meet the equally serious problem of having to make up for the uncertainty of legacies.

SOME ANATOMICAL CONSIDERATIONS OF THE DISPOSITION OF THE SCIATIC NERVE AND FEMORAL ARTERY:

WITH SUGGESTIONS AS TO THEIR CLINICAL SIGNIFICANCE.

BY FREDERIC WOOD-JONES, M.B., B.S., D.Sc. LOND.,
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IT has for some time been quite obvious that the anatomical relation of the brachial plexus to the most cephalic rib element explains the presence of vascular and nervous symptoms in the arm in that great group of cases known as "cervical ribs." The pressure of the lowest cord of the brachial plexus upon the rib produces the sensory changes and the muscular wasting, and in some cases it also produces (as Mr. T. Wingate Todd has shown[1]) the vascular symptoms by pressure upon the sympathetic vascular nerves which run in the hind end of the brachial plexus. In those cases in which the pulse at the wrist is at once restored upon raising the arm from the side, it is probable that direct pressure upon the vessels produces the vascular symptoms; but whichever factor comes into play, both vascular and nervous symptoms are produced by one pressure point, and both may be manifested together, though either symptom may be predominant.

This apparently satisfactory explanation, which receives ample confirmation in the results of operative treatment, prompts the speculation as to a similar explanation being applied to some conditions possibly caused by pressure upon the constituents of the lumbo-sacral plexus. It is at once apparent that although in the arm vascular and nervous symptoms are caused by one lesion and appear in consort, the case is extremely different in the leg.

FIG. 1. FIG. 2.

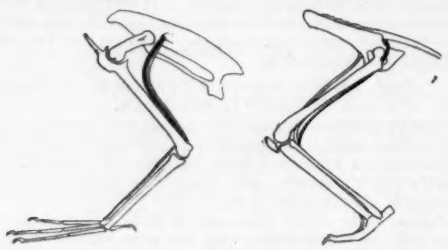

FIG. 1.—Simple diagram of the hind limb of a bird to show the arrangement of the flexion surfaces and the disposition of nerve (shown black) and artery.
FIG. 2.—Simple diagram of the hind limb of a pronograde mammal to show the arrangement of the flexion surfaces and the disposition of nerve (shown black) and artery. Compare with Fig. 1.

Briefly, there is a condition known as thrombo-angeitis of the leg with intermittent claudication, which is accompanied by only trivial nervous symptoms, and a condition of neuritic sciatica which is accompanied by no vascular changes. Two symptoms which are combined in the arm are therefore manifested separately—and under totally different circumstances—in the leg.

It has seemed to me that it is by no means impossible that the anatomical disposition of the main artery and nerve of the lower limb may explain this separation of vascular and nervous symptoms in the leg; for whereas in the arm the limb artery accompanies the limb plexus, in the leg the limb artery and the main limb plexus are situated on opposite sides of the limb. It cannot be doubted from a study of the history of the nerves and vessels of the caudal limb that this disposition has been evolved for simple mechanical reasons. In the amphibians and the reptiles, in which the femur is placed in the primitive position and does not serve greatly to support the weight of the body, the artery of the limb runs with the sciatic nerve along the caudal aspect of the limb. In birds this position is retained, and it is of interest to note that only among the penguins, in which the leg has come to assume a more mammalian position, has the femoral artery replaced the more primitive sciatic. A glance at Figs. 1 and 2 will demonstrate the different mechanical conditions of the avian and mammalian hind limb, and make clear the efforts of evolution to maintain the arterial channels upon the main flexor aspect of the limb in order to avoid stretching the artery in the flexion of active limb movements. In the mammals, the femoral artery upon the flexor aspect of the thigh has replaced the old sciatic, and again it is of interest to note that in the bats, in which the hind limb still maintains its primitive position at right angles to the body, the mechanical need has not arisen, and the sciatic artery persists. The development of the femoral artery in the penguins, and the retention of the sciatic in the bats, seem to demonstrate clearly that postural and mechanical reasons, rather than zoological affinity, rule the disposition of the hind limb arteries. The vascular channels are plastic, but the nerve plexuses are not, and the sciatic nerve has retained its primitive position in the mammalia.

FIG. 3.

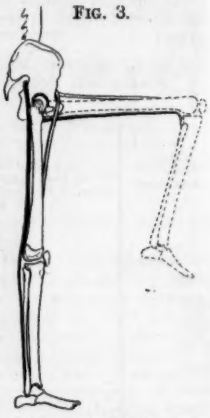

Diagram of the hind limb to show the influence of flexion and extension on artery and nerve.

Now a great change has come about in the fitness of the pronograde mammalian disposition of nerves and arteries in upright man. (See Fig. 3.) With the straining back of the leg, the structures upon its cephalic aspect become stretched, and the femoral artery and its nerves are now kinked over the brim of the pelvis. The sciatic nerve has a right-angled bend taken out of its course at the hip-joint, but this is in part counteracted by the straightening out of the knee-joint; nevertheless, a normal child with an extended leg can very completely flex its hip-joint, although in adults this ability to flex the hip and extend the knee becomes more limited. The pressure exerted on the sciatic nerve during such a movement is, of course, manifested in the pain produced in a person suffering from sciatica by such actions as the attempt to draw on a riding boot or put on a sock. The sciatic nerve lies upon the pelvic bones at the prominent eminence of the junction of the ilium and ischium above and behind the acetabulum, and at this point the pressure may be increased by irregularities of the acetabular margin developed in osteo-arthritis of the hip. The sexual differences in the pelvis make this normal bony prominence a far greater interruption in the course of the nerve in the male than in the female, for in the female, with the opening out of the sciatic notch, this point is carried further forward and outward. (See Fig. 4.) It is not improbable that this sexual anatomical difference accounts for the greater frequency of this form of sciatica in men.

FIG. 4.

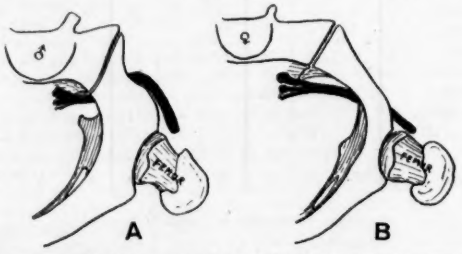

Diagram of sciatic nerve in the male (A) and female (B) to show the different course in the two sexes.

Pressure or tension sciatica, the true equivalent of brachial neuritis from rib pressure, is therefore most likely to be produced in males who, accustomed to the erect attitude, have to remain for long in a sitting posture—a condition seen in its inception in the "pins and needles" manifested in many

[1] THE LANCET, August 10th, 1912, p. 362.

members of a class of students towards the end of an hour's lecture. On the other hand, pressure on the femoral artery and its sympathetic nerves, which, anatomically, run from the second and third lumbar nerves, is likely to be produced upon the bony brim of the pelvis by straightening the limb after prolonged flexion. The artery and its nerves pass over the prominence caused by the junction of the ilium and pubis, to which eminence the posterior wall of its sheath is bound down by the upper extension of the ilio-pectineal septum. It is probably here that the pressure effects are produced. Such pressure, on standing upright, would most likely be developed in individuals who from early years had been accustomed to prolonged hours of sitting.

It is extremely significant that the vascular lesion in these cases of intermittent claudication, which has been described by Dr. F. Parkes Weber[2] in these words, "both the artery and one of the veins accompanying it were occluded by organising thrombi," is similar to that described by Mr. Wingate Todd in the radial artery and accompanying veins in a case of cervical rib.[3] It would, therefore, seem to be not unlikely that neuritic sciatica and intermittent claudication may represent the brachial neuritis and vascular symptoms of cervical rib cases; that both are pressure effects produced by the passage of structures over the pelvic bones, but that opposed conditions produce the two sets of symptoms.

AN UNUSUAL ABDOMINAL CASE.

BY JOHN AIKMAN, M.D., C.M. GLASG.

A MARRIED woman, well advanced in her forty-third year, summoned me to relieve her of a retention of urine. I found her bladder hugely distended, and I emptied it by the catheter. I had not seen her for about two years, but I had previously told her of the existence of a uterine fibroid which had not seemed to grow much and which I hoped would never call for operation. She told me, at my visit, that she had suffered from retention of urine for some time, but that with waiting and trying she had always previously got relief. When the bladder was emptied I found the old fibroid, of about the size of a billiard ball, near the right cornu of the uterus, and about the same size as on former occasions. But the abdomen was filled up to nearly the level of the umbilicus with a firm but more soft mass which was new and not easy of explanation. The patient's temperature was slightly raised—99·4° F. The pelvis was filled with the same mass which protruded into the abdomen, the main location being in Douglas's pouch. The os uteri was patulous and the posterior wall was bulged towards the uterine cavity. The whole organ was lower in the pelvis than is normal. The patient had a son, now in his seventeenth year; her periods were regular—in fact, the recent attack of retention had begun during her last period in the few days preceding my visit. In the evening retention again took place and was relieved by the catheter. Next day she was more easy and passed urine, but did not quite empty the bladder. She was told that no further information could be given without an exploratory incision, and as she wished this done without delay it was performed on the fourth day after she was first seen.

After due preparation the abdomen was opened through the right rectus and the cavity was found unduly moist, but without any such collection of fluid as could be called ascites. The old fibroid was there as described, and the ovaries were manifestly degenerating. The mass which bulged up from Douglas's pouch was shut off from the general cavity of the peritoneum, but was attached to the uterus nearly as high as the site of the fibroid. It was thought unwise to open it into the general cavity, so the ovaries were tied off and removed, and the cavity closed for the time with catch forceps. The anterior lip of the os uteri was fixed with vulsellum forceps, and the posterior lip incised into the bulge, in the middle line, and back into the base of the swelling. Copious watery discharge cozed from the cut surfaces, and with great care masses of pale-coloured tissue resembling an old placenta were extracted. Many portions were almost as hard as a soft fibroid, while the less hard portions showed none of the characters of a recent placenta. The higher portions of the mass came down more easily, apparently indicating that the unfound fœtus had escaped from below; but the higher portion was so intimately attached to the uterus that the fundus came down into the vaginal wound and was removed. The utero-vaginal stump was brought together, but the opening into the sequestered placental sac was left open for drainage. The completeness of the isolation of the peritoneal cavity was verified from the abdominal wound, which was then closed. A catheter was then passed and urine free from blood-stain was drawn off. The operation was long and tedious, but the promise seemed to be good. The catheter was prescribed to prevent any soiling of the vaginal wound, but this was not accomplished. The vaginal discharge was very copious and soon became odorous. The vagina was douched with the hope of securing against any infection of the higher parts, and the abdominal wound healed without any sign of infection of the peritoneal cavity. But the patient sank and died during the twelfth day after operation.

No information can be obtained as to the date of this relic of an extra-uterine pregnancy, but the placenta was firmer and harder than was the placenta in one case in which a similar vestige was removed six years after the date of a pelvic hæmatocele. The patient was a hardworking woman, and the probable explanation is that the contraction of the placenta in its lower regions caused the retention of urine and the descent of the womb. It is not difficult to understand that the retained urine spread some infection to the placental remains, which were obviously on the verge of inflammatory change. I hope that the operative interference gave the patient the more safe prospect.

My acknowledgments are due to Mr. A. C. Wallace and Dr. M. Ross Taylor, who assisted me.

Guernsey.

[2] THE LANCET, Jan. 18th, 1913, p. 169.
[3] THE LANCET, August 10th, 1912, and Journal of Anatomy and Physiology, January, 1913.

A CASE OF GANGRENE OF THE LEG IN AN INFANT 11 DAYS OLD; AMPUTATION; RECOVERY.

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AND
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THE occurrence of gangrene of a large portion of the limb of an infant under a month old must be such a rare occurrence as to justify the publication of the following case.

A boy was born on June 20th, 1912, the first child of apparently healthy parents. The labour was quite natural, the presentation was a normal vertex, and no assistance was required; indeed, the child was born before the arrival of a nurse or medical man. A neighbour, however, was present, and the medical practitioner arrived in time to tie the cord. The child was apparently quite well until June 30th, on which date a small blue patch appeared on the outer side of the calf of the right leg. The area of discolouration gradually became larger, and by the next day had spread down to the ankle. By July 2nd it had reached the outer toes. On the 5th the child, now 14 days old, was taken by his father to St. Mary's Hospital. The condition was then as described below.

The lower two-thirds of the right leg were dusky blue; immediately above this level the skin was red, and gradually faded into the natural colour just below the knee. The line between the two areas wandered in an irregular manner right round the limb. The right limb was much colder than the left, but was not devoid of heat, though probably this was communicated to it from the opposite leg. There seemed to be no circulation in the discoloured portion, although the big toe and the adjacent portion of the foot

seemed to be of a more natural colour than the rest. No pulsation was felt in the vessels of the leg, but then an attempt to make out the presence or absence of pulsation is of little value, as even in moderately nourished children of this age the vessels are so small that they are completely masked by the subcutaneous tissues. The child appeared ill and had begun to refuse his food, and according to the mother he was losing weight. As, however, no accurate weighing had been carried out we cannot give details as to the amount of weight lost. The cord had separated and the stump was quite clean. The child appeared to be well cared for and no cause for the gangrene could be made out. There was no sign or history of trauma.

The limb was powdered with boric acid and wrapped in sterile gauze, outside which was placed a thick layer of wool. Both limbs were treated in the same way, and the child was ordered to attend the hospital daily for observation. An unfavourable prognosis was given to the parents. A colleague saw the child and strongly urged the father to have the limb amputated. This the father refused, saying that he would rather have the child die than have him brought up minus a limb; he added that it would be hard enough for him to earn a living when in possession of all his limbs, and he had no wish for a child of his to be handicapped by the loss of one. As we could not deny the truth of the father's assertion, we did not feel justified in attempting to alter his opinion, especially as it seemed very doubtful that an operation would save the life of the child.

The child gradually got worse. A line of demarcation formed between the living and dead tissue and blebs containing pus formed around the limb. The body of the infant broke out in a pustulous rash which was evidently due to septic absorption. The child was losing weight rapidly, sick, and refusing his food. On July 11th the limb began to separate, and the mother thought the child was a little better. The parents were then warned of the possibility of the child living for some time without operation, and were told that if he was no worse in a day or two he might possibly live altogether, and in that case it was their duty to modify their opinions and to help him as much as possible. On the 14th the bones were visible in front. The child had begun to improve after the rupture of the skin and escape of the pus, and his improved condition was obvious also to the parents. As they no longer objected to an operation the child was taken into hospital, given a general anæsthetic, and the limb amputated, the flaps being fashioned immediately above the line of demarcation. No saw was needed, as the knife passed quite easily through the cartilaginous upper end of the tibia. The wound was sewn up without drainage, and the child made an uninterrupted recovery. As there was a tourniquet round the limb the child lost no blood at the operation, but the tourniquet prevented us noting if the vessels were patent or if they were closed by clot. The whole operation did not take longer than about eight minutes.

On the cause of such a condition it is only possible to speculate. The possibilities which occur to us as responsible for such an extensive gangrene are: (1) injury or frost-bite, (2) embolus, (3) syphilis, or (4) congenital malformation of the vessels. Of injury there was neither history nor evidence, and the time of year precluded the possibility of frost-bite. Syphilitic infection was thought possible, but Wassermann's test applied both to the father and mother proved negative. Embolus first seemed the most probable cause, although there was no evidence of septic infection of the cord. An embolus might have travelled from the umbilical vein, missed the capillaries to the liver by passing through the ductus venosus, and so entering the right auricle. It could then pass through the foramen ovale into the left auricle, or through the ductus arteriosus to the general circulation. But to have caused such an extensive gangrene to the leg the embolus must have lodged somewhere in the femoral vessels. No evidence of this was discovered.

The limb was hardened in formalin and the vessels dissected out, but no evidence of abnormality was found. Microscopic sections were made of the anterior tibial, but only slight thickening of the endothelium was noted, probably inflammatory in nature, as it was found quite close to the dead area. The cause of the condition therefore must be left undecided.

Since the operation the infant has remained perfectly well, and is now a fine, healthy child.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SPECIAL MEETING OF FELLOWS OF THE SOCIETY.

Discussion on Alimentary Toxæmia: its Sources, Consequences, and Treatment.

A MEETING of this society was held on March 10th, Sir FRANCIS H. CHAMPNEYS, the President, being in the chair.

Dr. W. HALE WHITE opened the discussion by a general survey of Alimentary Toxæmia. His remarks are published in full on p. 743 of this issue of THE LANCET.

Dr. F. W. ANDREWES discussed the Bacteriology of the Alimentary Canal and its Relation to Alimentary Toxæmia. He pointed out the ideal conditions offered by this region of the body for bacterial growth, and showed that certain groups of bacteria had specially adapted themselves for such an existence, so that the bacterial flora of the alimentary canal was a unique and characteristic one, the bacterial properties of which had been moulded by its environment. Most of the species present possessed a high degree of metabolic activity. The numbers and varieties of the species normally present in the alimentary canal were then considered. It was pointed out that no evil effects appeared to result to the healthy body from the presence of bacteria in the intestine, probably because in the course of evolution the body had acquired the power of neutralising any toxic products absorbed. In morbid conditions this might not be the case. The alimentary flora might be profoundly modified by local infection with more actively pathogenic species, or stasis in any segment of the canal might lead to excessive absorption of ordinary bacterial products. Dr. Andrewes pointed out the danger of loose usage of such terms as "toxin" and "toxæmia," which are in large part confessions of ignorance. He defined alimentary toxæmia as "the absorption from the alimentary canal of chemical poisons, of known or unknown composition, in sufficient amount to cause clinical symptoms, the blood having served as the channel of distribution to the tissues which are poisoned." He summed up the part played by bacteria in the process in the following propositions: 1. In an important group of cases the poisoning is by foreign proteins as such, the defect lying in the liver, which ought to shield the body from their effects. With this bacteria have little to do. 2. The main effect of bacteria lies in their ability to carry out protein cleavages beyond the capacity of the ordinary digestive ferments with the formation of toxic products which, when in excess, the body is unable to neutralise. 3. There is at present little evidence that true toxins derived from the ordinary flora of the gut, soluble or intracellular, play much part in alimentary toxæmia.

Dr. VAUGHAN HARLEY spoke of the Toxins of the Alimentary Canal. He said that considerable difficulty occurred in the examination of the toxins of the alimentary canal, since those which would be absorbed would not be recoverable in the stools. That toxins were probably formed in the alimentary canal and absorbed into the general circulation seemed to be supported by clinical observations. The other poisonous products had to be considered, that were derived from the food taken and from the secretions and excretions of the alimentary tract. The protein, during the ordinary process of digestion, yielded certain products, such as the peptones and amino-acids, all of which were more or less toxic. They tended to inhibit the coagulation of the blood and have a lymphagogue effect, and they also caused a fall in arterial pressure and a febrile reaction. It was probable that, under certain conditions of the alimentary canal, these substances might be absorbed as such and play a rôle in alimentary toxæmia. The products of protein putrefaction in the bowel would also seem to act as poisons. The aromatic substances, indol, skatol, phenol, and cresol, which were formed in various quantities by the breaking down of protein by the various bacteria of the alimentary tract, appeared to cause various symptoms of toxæmia. In children increased intestinal putrefaction led to distinct muscular weakness and malnutrition. In adults

various symptoms, which were grouped under the term neurasthenia, were frequently accompanied by increased intestinal putrefaction. Lassitude and headache were complained of, together with various obscure nerve pains. Muscular fatigue was found to be a very pronounced symptom, and premature decay with early arterio-sclerosis occurred in individuals who had an increase of the aromatic sulphates in the urine. In all cases of this formation of aromatic substances anæmia was a pronounced symptom, and sometimes was so severe that it might resemble pernicious anæmia. The increase of intestinal putrefaction occurred when too large quantities of protein were taken in the diet, or when there was delay in the motor powers of the alimentary canal. Under pathological conditions, the increase of aromatic substances might be still more considerable. Sulphuretted hydrogen was also formed by protein putrefaction in the alimentary canal, and it appeared that, in addition to causing anæmia, it was accompanied by headaches and very marked mental depression. The products of intestinal fermentation of the fat and carbohydrates seemed not to play so great a rôle in toxæmia of the alimentary canal as the protein, the fatty acids formed acting principally as irritants which might lead to vomiting when the fatty acids were excessive in the stomach or diarrhœa when it occurred in the bowels. In children the acid products of fermentation were more often found than in those of older age, and might cause severe vomiting and diarrhœa. The oleic acid might account for the anæmia which occurred in such children, and in some cases the excessive quantity of fatty acids absorbed into the circulation might cause acidosis. In adults increased fermentation was rarely unaccompanied by increased protein putrefaction, so that it was difficult to consider how much of the auto-intoxication might be due to the acid products of fermentation and how much due to the products of protein putrefaction. Urobilin, which was formed from the bile pigment in the large intestine, appeared to be only slightly toxic, and was principally of interest as indicating the amount of protein putrefaction occurring in the intestine. The increase of urobilin might be produced by increased protein putrefaction, leading to destruction of red blood corpuscles, and hence an increase of bile pigment being thrown into the bowel.

Professor ROBERT SAUNDBY read a paper on Alimentary Toxæmia, its Symptoms and Treatment. After describing the various forms of food poisons he laid stress upon the natural protective agencies which he said were so powerful that under ordinary conditions they were sufficient to protect the body against these dangers. These protective agencies were: (1) the digestive secretions; (2) impermeability of the mucous membrane; (3) the intestinal mucus which delayed absorption; (4) the action of the ordinary intestinal microbes which were able to utilise the toxins secreted by allied species; and (5) the antitoxic action of the liver. Inflammation of the mucous membrane in any part of the alimentary tract might diminish or abolish this protection, and alcohol should be regarded with suspicion as slowing or checking the digestive processes and inhibiting the protective agencies upon which safety depended. He considered the various means by which these protective agencies might be strengthened or reinforced, and in conclusion he submitted: 1. That under physiological conditions the natural protective agencies in the alimentary system were sufficient to shield the body from the dangers of poisons formed therein or of those introduced with the food, provided that these were not in overwhelming amount. 2. That infrequent or incomplete evacuation of the colon was not in itself a cause of disease. 3. That such morbid symptoms as arose resulted from a breakdown in the protective machinery in consequence of functional defects or pathological changes in the organs concerned. 4. That wholesome food in reasonable quantity might consist of animal and vegetable protein, carbohydrates and fat in due proportion, and that the evidence did not justify the entire exclusion of animal protein as being directly or indirectly a cause of toxæmia. 5. That when toxæmia was present treatment should be based on the principles of eliminating the poison already present, preventing its further introduction and reinforcing the natural protective agencies. 6. Where there was extensive disease of the wall of the colon the exclusion or removal of this organ was a justifiable proceeding after a reasonable trial had been given to medical methods.

Mr. ARBUTHNOT LANE, dealing with the consequences and treatment of alimentary toxæmia from a surgical point of view, gave a brief *résumé* of the Surgical Treatment of the Auto-intoxication and other Effects which Result from Chronic Intestinal Stasis. The causation of stasis and the consequent infection of the gastro-intestinal contents, he said, are due to improper feeding in early life and subsequently to the prolonged assumption of the erect posture of the trunk. The changes that result in the drainage scheme are evolutionary in nature and simply mechanical in origin. To meet the tendency to downward displacement of the viscera which results from an accumulation of fæcal matter, at first in the large intestine and later in the small intestine and stomach, membranes or mesenteries develop. These bands represent the crystallisation of resistances. They form in the first instance as thickenings on the peritoneum, and later as distinct membranes or mesenteries which support the viscera and tend to obviate their prolapse. Some observers regard these new developments as being congenital in origin, while others consider that they are inflammatory products. Against both these hypotheses are the facts that they do not exist at birth; that they can be seen in every stage of development during the lifetime of the individual; that they vary distinctly with occupations; that they commence at that point in the mesentery which is most distant from the bowel and are obviously developed for the purpose of securing that particular portion of the intestine more closely to the abdominal wall; that they appear only on one surface of the mesentery, and that surface is the one along which the greater amount of strain is exerted; and that they correspond exactly in situation and direction to the lines of force. Besides this they occur in the layers of peritoneum in which the main lymphatic trunks do not run, while they do not develop on such peritoneal surfaces as are chiefly in relation with the lymphatic glands and vessels. At their commencement they serve a useful purpose. Later they tend to impair the function of the part and consequently to shorten life. This is a common characteristic of such evolutionary changes as develop during the lifetime of the individual. While the effluent through any portion of the intestine may be controlled by some mechanical means applied externally, as, for instance, by a band, membrane, or appendix, the contents of the intestine may also be dammed back merely by the accumulation of material in the bowel beyond. This is illustrated by the puddling and obstruction in the much elongated pelvic colon seen so frequently in tuberculosis and rheumatoid arthritis in young people, and again in the delay of the contents of the ileum and their consequent infection when material is accumulated in a large dilated cæcum occupying the true pelvis, or occasionally when the cæcum is fixed immovably in the iliac fossa. In any case the result is the same—namely, stagnation of the intestinal contents and the changes consequent on such delay. The result of this stasis of the intestinal contents manifests itself in two distinct ways which may or may not be obviously associated clinically. The mechanical results of such delay in the small intestine are interference with the effluent from the duodenum and consequent distension changes in the duodenum, more especially in its first part. This obstruction produces engorgement of, and later inflammatory changes in, the mucous membrane of the bowel, and may finally cause ulceration and perforation, or cicatrisation and stenosis of the first part of the duodenum. Spasm of the pylorus follows on distension of the duodenum and this brings about dilatation of the stomach with hypertrophy of its walls. Because of the strain exerted by the heavy contents of the stomach, often increased by the weight of a habitually loaded transverse colon, engorgement, inflammation, ulceration, and, finally, cancerous infection of the mucous membrane may develop along the lesser curvature at the site of greatest strain. This area of excessive tension approximates to the pyloric end, but varies with the position of the liver. Spasm of the lower end of the œsophagus occasionally complicates this condition, and material may accumulate in the œsophagus. The term cardiospasm has been applied to this condition, which exists in very varying degrees of severity and intermittency. Its symptoms and treatment have been fully described by Dr. Plummer. The alteration that takes place in the contents of the stomach and small intestine due to their infection by organisms and consequent chemical changes produces a quantity of gas, &c., and this determines the symptoms which are grouped under the

comprehensive term "indigestion." The ducts of the pancreas become infected by the direct extension of organisms along them, and induration, inflammation, and cancer of that organ may result. Similarly, in the case of the liver gall-stones are developed with all the troublesome sequelæ of their presence, the last of which is too frequently cancer. The infection of the ducts may extend up into the liver, and inflammation of that organ may result. Besides the mechanical changes in the gastro-intestinal tract and in the ducts which open into it, the chief trouble consequent on the stasis is the auto-intoxication produced by the absorption from the gastro-intestinal tract, and especially from the small intestine, of a greater quantity of toxic material than the liver and kidneys can deal with. This auto-intoxication produces a degeneration of every tissue in the body. It is particularly manifest in the organ which converts the poisons, in the heart and vessels which convey them, and in the kidneys which excrete them. The effect of the poisoning is shown especially by a loss of fat and by a degeneration of all the muscular tissues of the body. These factors are of especial importance in the female whose function of accommodating and transmitting a fœtus renders her more liable to change in consequence. The outline of her body is lost because of the dropping of the breasts and abdomen and the wasting of the buttocks. The uterus becomes soft and heavy and bends about. It drops backwards in most cases so that the gorged heavy fundus rests on and tends to obstruct the rectum. The kidneys, being no longer cushioned in fat, prolapse, as do all the other viscera of the abdomen. In this manner a vicious circle is set up by which the stasis and consequent auto-intoxication are still further exaggerated. Thus a condition of premature senility is brought about. The skin becomes thin and stained and its secretion frequently offensive. The breasts undergo degenerative changes, manifested in the first instance as induration, to be followed by inflammatory and cystic degeneration, and possibly lastly by cancerous infection. The thyroid may enlarge, form tumours, and symptoms of exophthalmic goitre may not infrequently develop. The circulation is much affected. In some cases the blood pressure is abnormally high when it is associated with pretty obvious changes in the heart and aorta, while in others it is subnormal. The general body temperature is subnormal, whereas that of the extremities is always so, sometimes in such a marked degree as to suggest Raynaud's disease. Microbic cyanosis may also be present. The cerebro-spinal system is affected in a very marked manner by the poison. The patient is always depressed, feels stupid and unfit for physical or mental exertion, and suffers from headache, which varies in character and intensity. Neuralgia or neuritis is frequently complained of. The sufferer sleeps badly, tends to fall asleep at all times of the day, dreams greatly, and awakes from sleep without feeling refreshed. These and other symptoms may exist in any degree of severity. In some cases the individual is mentally so dull as to appear imbecile, while in others the misery is so great that the patient willingly resorts to drugs, drink, or suicide as the only available means of alleviation or freedom from suffering. The eyes are definitely affected in many ways from the auto-intoxication. The condition of the conjunctiva is characteristic of its presence and degenerative changes in the tissues of the eyes are brought about. The sense of hearing also becomes defective in some cases, probably on account of degeneration in the nerve tissue or of infection in the spaces in connexion with the middle-ear. The resisting power of the tissues to the entry of organisms is lowered. The effect of this is seen perhaps most commonly in the sockets of the teeth, and especially around the lower incisors. Organisms establish a foothold in the gum about the fang and produce a condition of inflammation which may sooner or later destroy the teeth. The products of suppuration from the infected gums being swallowed increase the infection of the upper portion of the gastro-intestinal tract and seem to aggravate the general depression. A similar infection may occur in the sinuses and lymphatic tissues about the nose and throat. The genito-urinary tract of the woman is particularly liable to infection and innumerable troubles affect her in consequence and interfere with the satisfactory performance of her functions. These patients readily develop tubercle or rheumatoid arthritis. I do not believe that these diseases can exist except in the presence of auto-intoxication. The evidence in favour of this statement is that these cases invariably show very definite clinical and X ray evidence of stasis, and that the symptoms disappear and the patients recover sometimes with startling rapidity when the condition of stasis has been effectually dealt with. I would remind you of the remarkable confirmation of the extreme importance of effective drainage which Carrel's experiments afford. He has shown that tissue is immortal provided that it is properly drained and that it obtains sufficient food. The difficulty that has to be met by us does not lie in the supply of sufficient nutrition, but in dealing with the defective state of our drainage apparatus. Carrel's observations are of the greatest possible service at the present moment, since they afford us the same confidence in our methods of treatment that X rays did in the case of operation for simple fractures when the opposition to that form of treatment was intense and to a great extent unscrupulous in its methods. If we wish to deal with primary causes and not merely with effects, it is our business in all cases of auto-intoxication resulting from intestinal stasis to improve the drainage of our bodies so that material is no longer allowed to stagnate, decompose, and poison our patients. We cannot now pursue obsolete methods and be satisfied with the treatment of end results. We must deal with the defective condition of the intestines, the prime factor in the development of disease and death. Whether this can be effected sufficiently by the use of lubricants, abdominal pressure, and diet, or whether some operative treatment is required, must depend on the nature of the stasis and the condition of the patient. Here again X rays afford us very great assistance, since they indicate not only the rate of passage of the contents through the several portions of the tract, but they often demonstrate the exact nature of the obstruction. Besides this they show many of the changes in the heart and aorta which are often serious complications of auto-intoxication. In the vast majority of cases the ileal effluent is at fault. Sometimes this can be met by the removal of an appendix controlling the passage of the ileal contents into the cæcum, or by the division of a membrane or a ligament reducing the lumen of the last two or three inches of the ileum, while at other times the best result is obtained by fixing the divided ileum into the pelvic colon, and by exaggerating the last kink by means of a suture so as to avoid the ascent of fæcal matter into the iliac colon. This last method of treatment is by far the most efficient, and results in immediate benefit in the vast majority of cases. Within a few hours of the operation the patient asserts that she is quite different, and that she has lost that feeling of intense misery and depression from which she had suffered for years. The feel of her hands, &c., is altered, and she looks a greatly improved woman. In a certain proportion of cases it is advisable to remove the large bowel at the same time or subsequently. This is particularly called for when the condition has existed for a long time and there is much change in the large intestine. The only risk of these operations is that common to all abdominal operations—namely, the formation of adhesions which may anchor or obstruct the lumen of pieces of small bowel. This can be best prevented by rigid asepsis, by avoiding exposure and manipulation of the intestines, and by approximating the edges of peritoneal surfaces as accurately as possible. It is now too late for mere quibbling and for the negation of facts that are perfectly obvious and capable of demonstration in the clearest manner possible. This condition of defective drainage has already been dealt with by surgeons all over the world as well as by myself, and those who have had a large experience in the operative treatment of these cases are arriving at definite conclusions as to the best mode of dealing with them. Chronic intestinal stasis is a subject that is growing very rapidly in importance, and it cannot be decided merely by conjecture or on previous experience, but by the light of hard facts as afforded by the results of operative interference.

Mr. J. F. COLYER spoke on the Consequences and Treatment from a Dental Point of View. He prefaced his remarks by a reference to the two main sources of oral sepsis—namely, caries and periodontal disease. The main effect of caries was to render the teeth themselves and their immediate neighbours functionless, and in that way to produce stagnation areas and a marginal gingivitis. With regard to periodontal disease he emphasised the following points: (1) The gums might appear to the untrained eye almost healthy, yet the tooth socket might in places be

destroyed almost to the apex of the tooth, and pus might be present in the pocket around the tooth; (2) the disease was slow in its progress, more especially in the early stages; (3) the early stages of the disease could often be recognised in quite young adults; (4) the extent of the disease could only be accurately gauged by examining each individual tooth with a fine probe to ascertain the depth of the pockets; (5) the disease was more intractable and more serious in its results in those that were mouth-breathers. The relationship of nasal obstruction to dental sepsis was referred to, Mr. Colyer stating that it might be safely asserted that anyone who breathed through the mouth, even for a short period during the day, could not possibly have a healthy mouth. The consequences of dental sepsis were considered under the headings of (1) children and (2) adults. In children the results were due to insufficiency of masticated food plus the septic matter from the stagnant areas in the mouth leading to gastro-intestinal sepsis and all the sequelæ that follow that condition. In adults, dental sepsis caused trouble either (*a*) by direct absorption of the organisms or toxins, or (*b*) by the constant swallowing of the septic matter, setting up a gastritis which in its turn led to a general intestinal disease. Mr. Colyer went on to say that in forming an opinion as to the possible relationship of dental sepsis to general alimentary conditions it must be kept clearly in view that dental disease was very prevalent, and that therefore the association with another condition did not necessarily imply cause and effect. Still further, they must not omit to search for other causes of sepsis. That the effects of dental sepsis were far-reaching there could be but little doubt, but he did not think that the effects were different from what might be expected from sepsis in any other part of the body. Given the fact that there might be direct absorption from the body of the bone, it was conceivable that the organisms might form infective thrombi in any part of the body, or the toxins might damage a part the resistance of which was already lowered. If, too, there was constantly passing into the stomach food charged with septic matter, it was natural that a gastritis might follow and lead to intestinal sepsis with all its sequelæ. He stated that treatment in children must be directed towards rendering the mouth functional: (1) By correcting nasal obstruction if present; and (2) by treating the teeth themselves, and he strongly advocated the free removal of all septic teeth. In adults the treatment resolved itself into the treatment of periodontal disease. The problem was the efficient drainage of the pockets around the teeth—a problem which seemed easy in theory but which was exceedingly difficult in practice. Vaccine treatment was referred to, and it was pointed out that although vaccines might benefit the general condition, it was difficult to see how it could cause a disappearance of the pockets around the teeth. The question was discussed of allowing dental sepsis to remain when it had been shown to have a causal relationship to other conditions. He pointed out that the longer the source of sepsis was permitted to remain the greater was the damage to the tissues, and said that in young adults the most marked and rapid improvement in a general condition would often follow dental treatment, whilst in those of advanced years this improvement was often slow and not so complete.

HISTORICAL SECTION.

Restrictions concerning Circumcision under the Romans.—A New Egyptian Medical Papyrus.—English Herbals, 1525–1640.—Exhibition of Early Drug Pots.

A MEETING of this section was held on March 5th, Sir WILLIAM OSLER, the President, being in the chair.

The following gentlemen were elected corresponding (honorary) members of the section:—Professor Dr. Max Neuburger, Lieutenant-Colonel Walter D. McCaw, Dr. Fielding H. Garrison, Dr. William Henry Welch, Professor E. F. Cordell, Dr. Iwan Bloch, Professor Karl Sudhoff, Professor Dr. Chauffard, Professor Maurice Letulle, Professor Ludwig Heinrich Holländer, Professor Dr. E. C. van Leersum, Dr. V. Maar, Professor Barduzzi, and Professor Kavvadias.

Mr. JOSEPH OFFORD, member of the Associazione Archeologica Romana and of the Egypt Exploration Fund, read two papers—(1) Restrictions concerning Circumcision under the Romans, and (2) A New Egyptian Medical Papyrus. The first essay did not treat of the Roman imperial regulations as to circumcision as applicable to the Jews (of which a fair knowledge was already familiar to students from the classics or from the Roman laws), but of new evidence connected with circumcision of Egyptian priestly youths devoted to the cult of the ancient deities in Egyptian temples. The new information had been supplied by a few manuscripts among the many thousands of papyri of Roman times that had recently been obtained from Egypt and were rapidly being edited by specialists. Circumcision was an old sacerdotal, and, indeed, almost universal, custom in ancient Egypt, and therefore to retain the good opinion of the priests the Roman imperial legislators, with certain reservations, permitted the practice in the province that was so valuable a granary and, until exhausted, a mine of taxable wealth. The importance of the papyri consisted in their being actual documents properly engrossed in the correct phraseology for obtaining the permission to circumcise, and the administrative replies granting the request. Altogether eight such manuscripts were referred to, and abstracts of the contents of several of them were given, and from these a good idea of the formalities required, and therefore of the legislation governing the matter, was obtained. The newly discovered Egyptian Medical Papyrus was a much older treasure, dating as it did from some 2000 years B.C. The contents of it, concerning the list of remedies prescribed and diseases enumerated, were very similar to that of the famous Ebers papyrus, published some 30 years ago. The comparison of the two manuscripts proved that both were, to a large extent, made up of copies of one or more earlier collections of medical and magical texts or formulæ. The contents of this new papyrus and of the Ebers, and four or five more medical papyri known, indicated that they were not derived from the celebrated "divine" medical hermetic books, which the classics assert the Egyptians possessed in certain temple libraries, but that they were all the text-books used in daily work by the medical practitioners of that period. Some of the recipes were said to have been prescribed by the gods, and others were stated to be of foreign origin, but the new papyrus came from the ruins of a house in a small provincial town, and so was probably an inexpensive copy, for it was carelessly written, for a country doctor's use. The new papyrus did not advance our respect for the medical knowledge of the ancient Egyptians; indeed, it depended more upon magic for cures than did the Ebers treatise. In none of the works did any conception of the fact of contagion appear, and many remedies recommended must have been worse than useless. Whilst it was regrettable that the new papyrus was so similar in contents to the Ebers one, and so did not provide fresh material for the study of Egyptian medical learning, yet as the two manuscripts in many cases materially explained each other, they would enable scholars to produce a very accurate translation of them both, and when this was done their worth would have to be reconsidered by medical historians.

Mr. H. M. BARLOW read a paper on English Herbals, 1525–1640. The earliest herbal printed in England was a small quarto volume published by Richard Banckes in 1525 without the name of the author. The various editions through which this passed were extremely rare, only three being known to Pulteney in 1790, these being the only editions referred to by Meyer in his standard history of botany in 1856. Despite its rarity, this work was the most popular of all the English herbals, as was shown by the 17 editions which Mr. Barlow had been able to trace, nine or ten of which were not recorded by Ames. Some of these appeared with different titles, and had been regarded by bibliographers as original works by Walter Cary, William Copland, Anthony Askham, and Macer. Besides assigning approximate dates to some of the undated editions, Mr. Barlow showed that not one of these writers had anything to do with authorship of the work. "The Grete Herball" printed by Treveris in 1526 was a translation from the French work, "Le Grant Herbier," the origin of which was thought by many writers to be derived from the German Herbarius or Hortus Sanitatis. But Professor Camus proved it to be in part a translation of the popular Latin work on simple medicines erroneously attributed to Matthew Platearius, a Salernitan physician of the twelfth century. "The Grete Herball" was superseded by the learned and more original work of William Turner, the complete edition of which was printed at Cologne in 1568. Next appeared the Latin work of Pena and Lobel, printed at London in 1570–71, followed by Lyte's popular translation of "Dodoens's

Herbal" in 1578. The celebrated Herbal of Gerard was published in 1597, but its history was not creditable to the writer. It was really a translation of the "Pemptades" of Dodoens made by Dr. Robert Preest, a Fellow of the College of Physicians. On the death of the translator the work fell into the hands of Gerard, who altered the arrangement and published it as a work of his own. The last of the old British herbalists was John Parkinson, whose great work, "Theatrum Botanicum," contained descriptions of 3800 plants, nearly double the number in Gerard. The works of Morison, Ray, Grew, and others did not come within the scope of the title "Old English Herbals." By the time they were published the science of botany had grown up to an independent position, and was no longer a branch of medicine. The writers, moreover, were botanists in the modern sense rather than herbalists. Nor did the works of Culpeper and Cole, the ardent supporters of astrological botany and the doctrine of signatures, come under this heading. Besides their scientific value, Mr. Barlow showed that these old herbals had an artistic interest, the woodcut figures of plants being of great importance in the history of wood engraving. The paper was illustrated by a number of old herbals kindly lent by Mr. Bernard Quaritch.

Mr. J. D. MARSHALL (of Messrs. Bell and Croyden) showed a fine collection of Early Drug Pots. He stated that no fragment of pottery connected with pharmacy had yet been found dating from palæolithic times. The Egyptian tombs contained small pots made of unglazed terracotta, and pharmacy pots were often found in excavations at Pompeii and Herculaneum. The pharmacy jars of mediæval times were divisible into maiolica and faience, maiolica being a pottery formed of calcareous clay gently fired and then covered with an opaque enamel composed of lead, tin, and sand, the biscuit being generally a light yellow tint or colour disappearing under the opacity of the enamel. It was manufactured chiefly in Spain and Italy, whilst faience, which was generally of a later date than maiolica, was principally Dutch and English. The earliest examples of maiolica were Hispano-Moresque lustreware made by the Moors when they occupied Spain. The vessels were copied from oriental designs; they were decorated and were painted with metallic colours. The Italian Albarelli were much superior in design and finish to the Spanish examples. The shape was an elaboration of the joint of the bamboo in which drugs were packed and imported from the East. They were usually decorated in a single colour, the design being a combination of horizontal bands and discs usually with some small ornament, such as a trefoil or slight wavy line. These, the earliest examples, are said to be in "camaieu," but as the art of the potter advanced the decorations became more beautiful and were executed in polychrome. Allusion was made to the vases dated 1500 which are in the Musée de Cluny and to the set of pharmacy jars made for his domestic pharmacy by order of the Duke Gui d'Urbino in the latter part of the fifteenth century. They were probably the most costly in the world, and they are still preserved at Loreto. Many examples of very beautiful faience ware were made in France, and the Strasburg ware was well known. The productions of the Belgian, German, and Swedish potteries were generally of a poorer quality. Delft began to be made about 1600, and was an attempt by the Dutch potteries to imitate as closely as possible the blue and white Chinese porcelain that was being imported into Holland and Italy. The manufacture of delft was begun in England by Dutch potters, the first pottery being started at Lambeth about 1671 by John Ariene Van Hamme. The industry prospered, and there were soon 20 potteries at work in Lambeth alone. Bristol and Liverpool quickly became great centres for the manufacture of pharmacy jars. Richard Frank and Thomas Flower were well-known makers in 1697, whilst Zachariah Barnes made pharmacy jars a speciality at Liverpool. The delft of Dutch origin and that made at Lambeth, Bristol, and Liverpool were similar in shape, but Mr. Marshall showed by examples that it was not very difficult to discriminate between them. The English body was harder, coarser, and less resonant, whilst the decoration was decidedly inferior to the Dutch workmanship. Attention was then drawn to dispensing pots, and Mr. Marshall brought forward examples to show that they had been made in England from a very early date and that the English forms had developed certain peculiarities by which they could be distinguished from the Albarelli of Italy. The paper was illustrated by examples exhibited in the epidiascope as well as by lantern slides.

SECTIONS OF OPHTHALMOLOGY AND NEUROLOGY.

Disease of the Pituitary Body.

A COMBINED meeting of these sections was held on March 5th under the presidency of Sir ANDERSON CRITCHETT, C.V.O., the subject of the discussion being Disease of the Pituitary Body.

Professor E. A. SCHÄFER opened with a very detailed exposition, aided by numerous slides, of the structure and functions of the pituitary body. He said that that body was present in all vertebrates which had been examined, therefore it must be an organ of considerable morphological interest. Its development occurred as an extension of Rathke's pouch, which was an invagination of the buccal ectoderm towards the brain. This was met by a hollow downgrowth from the thalamencephalon, and the combination of the two into one organ formed the pituitary body. The gland consisted of three parts: (1) pars anterior; (2) pars intermedia; and (3) pars nervosa. Usually it was separated into two parts—the anterior and the posterior lobes. Remarkable alterations occurred in the pituitary as the result of thyroidectomy, and similar changes seemed to result where atrophy of the thyroid ensued. The alterations after thyroidectomy included: (1) enlargement of the pituitary body; (2) the presence of a colloid substance in the vesicles in the pars anterior, and a great increase in that of the pars intermedia; (3) a great increase in the number of hyaline bodies in the pars intermedia and the pars nervosa. It was not easy to explain these changes physiologically because the functions of the two glands were not identical, though both were probably connected with sexual development, for in the case of removal of either there was a stunting of growth and sexual infantilism. Moreover, castration had been observed by most to be followed by hypophysial hypertrophy. The greatest enlargement of the pituitary body was found in giants and acromegalics; the skeleton of giants was characterised by a disproportionately large sella turcica. The physiology of the pituitary body had been investigated experimentally by methods of both removal and addition, the latter by administration of extracts of the gland, and by implantation. The evidence following removal was conflicting. Young animals which survived extirpation had their growth retarded, and their sexual activity remained undeveloped. But some observers stated that total removal was not fatal, death—when it occurred—having been due to the complications of the operation. Mere injury to the pituitary might cause marked polyuria, but it disappeared after a few days. Possibly this was the explanation of the polyuria sometimes seen in association with fracture of the base of the skull. Feeding with fresh or dried gland substance was normally not attended with any obvious result, even in growing animals. There was certainly no retardation of growth, such as had been described. Attempts to graft the organ had usually been unsuccessful. Saline extracts of pituitary, injected intravenously, had a marked effect upon all involuntary muscles; they caused constriction of most of the blood-vessels of the body, a powerful and usually slowed action of the heart, the tone of which was increased, contraction of bladder, uterus and bowel, and the pupil of the excised eye in the frog was dilated. The substance producing these results was of a relatively simple nature, was soluble in water and dialysable, and was not destroyed by repeated boiling, nor by long keeping in a dried state or in a sterilised condition. It was insoluble in alcohol or ether. Intravenous injection of pituitary extract excited secretion in certain glands, such as the kidney, and in the mammary gland during lactation; there was dilatation of the renal arteries, though the effect on the general arteries of the body was constriction. The substance producing effects upon blood pressure, heart, and kidney was contained only in the posterior lobe, and it had been found in the cerebro-spinal fluid. According to the observations of Ott, Scott, and Mackenzie the galactagogue hormone of the pituitary was also confined to the posterior lobe, and it was assumed to be identical with that which caused the other effects upon blood-vessels, heart, and kidney. The anterior

lobe seemed related to the general growth of the body, especially that of the skeleton; while the posterior, including the pars intermedia, probably promoted the contractility and increased the tone of plain muscular tissue.

Mr. J. HERBERT FISHER commented on the complexity of function of the two portions of the pituitary body and the supreme importance of the gland to life, and its interactions with other ductless glands. Colloid was also formed, as in the case of the pituitary, by rare tumours which sometimes developed in the remnants of the post-anal gut. He also remarked on the fact that castration and oöphorectomy caused some overgrowth of the pituitary body, while the hypophysis enlarged during pregnancy. He believed the climacteric was prematurely reached, or impotence in the male, by months and even years before other symptoms pointed to disorders localised to the hypophysis, and in this direction observations of gynæcologists might be of value. Hypoplasia of the adrenals was also accompanied by retarded sexual development, while hyperplasia was accompanied with excessive development of secondary sexual characteristics. A case exhibited by Dr. H. G. Turney showed pituitary disorder with adiposity and abnormally raised blood pressure, undue pigmentation of skin, and liability to spontaneous bleeding. For diagnostic purposes the ophthalmic surgeon worked chiefly with his perimeter in recognising and watching pituitary disease. The typical condition was one of bitemporal hemianopia, though that statement did not cover the question. Cases had been recorded in which a central scotoma resembling that seen in tobacco amblyopia existed, but in which the extension of the scotoma resulted in bitemporal hemianopia. He did not see how pituitary tumours could press first at the anterior angle of the commissure; still, X rays were very serviceable for proving or negativing the existence of bone erosion. Mr. R. W. Doyne had shown that hemianopia of the colour sense might precede that of the form sense and give a guide to prognosis, and with that Cushing agreed. In a proportion of cases of pituitary body enlargement homonymous hemianopia was a symptom in the earlier development of the case, but he was convinced that an evenly balanced loss of the temporal field in each eye of simultaneous onset was the exception. Direct pressure on the optic chiasma, so glibly invoked, was far from being a satisfactory explanation of most of the cases. He asked whether neurologists believed that the anosmia present in some pituitary cases could be attributed to involvement of the uncinate gyrus. He believed the visual phenomena were explicable by traction effects on the visual pathways as the tumour extended between the chiasma and between the optic tracts in the interpeduncular space. For operation, he favoured a route through the fronto-temporal opening of the cranium. If this method were pursued, the free removal of the bone and opening of the dura mater on the opposite side allowed more freedom for elevation and displacement of brain, and thus gave more ready access to the pituitary region.

The debate was adjourned.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Patient.—Carcinoma of the Rectum.—Cases treated by Radium in the Royal Infirmary during 1912.

A MEETING of this society was held on March 5th, Mr. J. M. COTTERILL, the President, being in the chair.

Mr. J. W. STRUTHERS exhibited an adult male with a small Actinomycotic Lesion in the right cheek. Six months ago the patient had noticed a small nodule there of a chronic inflammatory nature. It had remained stationary until he commenced the use of 15 grains of iodide of potassium taken thrice daily for the past 15 days. He was employed in the hay department of a flour mill, and in this way the infection might have been obtained.

Professor F. M. CAIRD read a paper on Carcinoma of the Rectum, and illustrated it with lantern slides. His paper dealt with 43 cases treated during the ten years 1900–1910. The cases were subjected to operation with the view of removal of the disease entirely. The disease was much more common in males than in females, and was more frequent between the ages of 40–60 than at other ages, though it might occur early in life. The history was always interesting; very few of them were of short duration. A good time generally elapsed before a correct diagnosis was made, and after this the average duration of the disease was six months. It was disappointing that so much time was lost before diagnosis, as this might be done at a very early period of the disease by the exploring finger. As regarded the symptoms, the one common to each of the 43 cases was hæmorrhage. None of them had marked prolapse or piles; pain occurred in only half the number, and was not a prominent feature, as in carcinoma of the stomach. Pain was localised and was either present during defæcation or was of a dull aching nature. The third symptom which occurred in chronological order was irregularity in defæcation. At first constipation was complained of and was easily removed by the use of aperients. Then diarrhœa might follow with alternations of constipation, and still later diarrhœa along with discharge of mucus and blood and accompanied by tenesmus. In only one case were the stools of the pipe-stem variety. In only four cases was interference with micturition noted as a reflex symptom. Diagnosis was made in every case by the finger. As regarded the site of the lesion, the most frequent was 2½ inches from the anus, or a finger's length. The next situation in frequency was just within the anus, and the latter was often associated with early and severe pain, while the high situated tumour was often accompanied by no pain whatever. In one case where the finger could not feel the tumour, neither could the sigmoidoscope reveal it, and this was due to a binding down and kinking of the bowel; when the patient strained down the finger more easily reached the carcinoma. As regarded the method of examination, the operator should first examine the posterior wall and tip of the coccyx, then the lateral and finally the anterior wall. One noted if there were bleeding and whether the tumour was projecting, fixed, or movable, or whether the glands were involved. It was often difficult to decide whether the tumour was fixed or not, and in some cases where it appeared fixed the hand in the abdomen showed it to be movable. Patients above the age of 60 years did not stand operations of any magnitude well, and consequently if the growth were fixed or if other organs were involved it was not advisable to perform the radical operation. He had not found any advantage in colostomy except in a single case. As regarded the methods of removal—1. Kraske's was the ideal operation where one left an active sphincter, but the risk lay in the removal of the entire tumour, and also that union rarely took place by first intention. A gap or a fæcal fistula was left with prolonged period of healing and often the formation of a stricture. This operation therefore fell short of the ideal. 2. Lefranc's operation. This consisted in perineal excision along with parasacral incision; opening into the pouch of Douglas and pulling down the bowel. This was, perhaps the best operation and allowed one to implant the anus in a fairly normal site. 3. The combined operation by opening the abdomen also allowed one to inspect and detect any abdominal infection. As regarded some of the cases—1. A man, aged 46; encircling growth 2½ inches above the anus; no pain was complained of. An abdomino-perineal operation was performed under spinal anæsthesia, and 8 inches of the bowel were removed and the cut end pulled down into the perineum; perfect recovery; in six months he had complete control of the sphincter. Recurrence took place at end of one year in the connective tissue of the pelvis. 2. A female, aged 48. Symptoms, diarrhœa, blood, mucus, and pain extending down the right leg. She had been ill for eight months and her mother had died from gastric carcinoma. There was great dilatation below the level of the stricture. This ballooned condition was often found, and the consequent thinning of the walls caused their easy rupture. Colostomy was done in this patient and the tumour was removed. Five months later peritonitis developed and the woman died. At the post-mortem examination ulceration of Peyer's patches and perforation of the bowel were found, but no recurrence of the carcinoma. 3. A man, aged 53, who during eight months had suffered from diarrhœa and discharge of mucus. After having seen many medical men without benefit, he diagnosed his own case by means of his finger. After operation the perineal wound commenced to discharge urine; one could not tell from where this urine came, but it happened in four other cases. In all the discharge ceased in time. Now three years after the operation

the man was alive and well. 4. A man, aged 43. He had been ill for nine months; the tumour was in the pelvic colon and the operation was the combined abdomino-pelvic one. The patient continued three years in good health and died from carcinoma of the liver.

Mr. DAVID WALLACE said that personally he was in doubt as to what should be done in cases of carcinoma of the rectum. It was largely a question of technique. Some surgeons believed that the operation might leave a functioning anus in the normal position, but he had found this the great barrier to success. In the majority of cases it was a mistake to attempt to get this functioning anus. The first step was to get an artificial anus in the inguinal region and then to remove the disease *in toto*, and thus greater likelihood of remote success was obtained. Unfortunately, patients generally came too late to allow of successful operation. In such cases should an attempt be made to remove the disease or merely to do colostomy? He knew of one patient who lived four and a half years without operation, while a female patient lived in comfort for five years after colostomy had been performed. Colostomy might mean no discomfort to the patient. Resuming, Mr. Wallace said that colostomy was a good thing in itself and allowed the disease to be excised thoroughly and with less risk of septic infection or pneumonia.

Mr. HAROLD J. STILES asked how could a high carcinoma best be reached in order to diagnose it? He preferred to put the patient in the knee-elbow position, so that if straining occurred the tumour came down to the examining finger; bimanual examination hardly helped at all. A nodular stricture might be felt and then the sigmoidoscope could be employed. Exactly 4 inches could be felt up the rectum. He unhesitatingly said, perform a preliminary colostomy first. The great advantage in this lay in that the intestines were thoroughly cleared out, and as the further operation ought not to be performed for two weeks the health of the patient greatly improved. The lower part of the bowel could be thoroughly irrigated and cleaned daily. The mortality was due to sepsis and to the long convalescence. At the second operation it was advisable to begin by closing the anus first, then to remove the coccyx and the lower segment of the sacrum if necessary, and then to pull down the pelvic colon. The anterior wall was very thin and adherent to the membranous part of the urethra and prostate, so great care was necessary not to injure the bowel. Then the peritoneum should be opened widely and the bowel separated. There was no necessity to do more. Convalescence was reduced to five or six weeks, and there was no risk of sepsis, pneumonia, or delayed shock. The abdomino-perineal operation was rarely required. The removal of the coccyx permitted the taking away of the fat and glands in the hollow of the sacrum where the disease was most likely to return.

Professor CAIRD, in his reply, stated that of the 43 cases only four males and four women died. Peritonitis was not the chief cause of death. The deaths from œdema and congestion of the lungs may have been septic. Death took place from prolapse of the bowel (strangulation) in one if not in two cases.

Dr. DAWSON TURNER read a report, illustrated by lantern slides, on cases treated by radium in the Royal Infirmary during 1912.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 6th, the President, Dr. Stanley Riseley, being in the chair.—The following cases were shown:—Dr. Sinclair White: 1. Cases illustrating the Operative Treatment of Fractures. 2. Two cases to illustrate the necessity for after-treatment after operations for Talipes. 3. Operations for Resection of the Colon in three stages. 4. Papilloma of Lip with early epitheliomatous changes. 5. Enclosed Bilateral Branchial Cysts in Neck.—Mr. Arthur M. Connell: 1. Double Cervical Rib with pressure symptoms in arms. 2. Hypernephroma of Kidney, excision, recurrence, disappearance under Coley's fluid. 3. Congenital Ossification of Inter-transverse Ligament of Lumbar Vertebræ. 4. Union of Fracture of Shaft of Femur by Lane's plates in a patient, aged 72, under intraspinous stovaine.—Mr. Archibald W. Cuff: 1. Cases to illustrate after-effects of Gastro-enterostomy, performed for gastric and duodenal ulcers. 2. Congenital Syphilitic Disease of Knee-joint in a child.—Mr. Ernest F. Finch: 1. Cases of Infective Arthritis of Knee and Wrist. 2. Recurrent Carcinoma after removal of both breasts, with extensive secondary growths on chest, neck, and in liver.—Mr. W. S. Kerr: 1. Epithelioma of Middle-ear Cleft, in a man, aged 50. Cleft eroded by vascular, grey granulation tissue, exposing facial nerve for the whole of its vertical length. Persistent pain in right side of head. Exuberant granulations which bled easily. History of middle-ear disease since childhood. 2. Extradural Abscess with Mural Thrombosis of Sigmoid Sinus. Ligature of Internal Jugular. 3. (?) Tuberculous Disease of Maxillary Sinus in a woman aged 58. Caldwell-Luc operation for infra-orbital pain and swelling of cheek and dulness on transillumination. Mucous membrane found thickened in places. Section showed typical tubercle giant-cell systems. No tubercle to be detected elsewhere. 4. Recurrent Sarcoma of Ethmoid after a year. Treated by free removal (temporary ligature on carotid) and cauterisation with Paquelin's cautery. The upper jaw was removed at primary operation. The cavity was now almost completely epithelialised. 5. Sequestrum from Static Portion of Labyrinth showing one canal nearly complete and part of another. Patient had symptoms of cerebellar abscess, but exploration was negative.—Mr. G. H. Pooley showed: 1. Case of Interstitial Keratitis treated by mercury and salvarsan. 2. Cases illustrating the different varieties of Cataract and Injuries. 3. A middle-aged man with Ulcers on each Cornea, the result of a ganister accident. Patient had glycosuria, and the only beneficial treatment for the ulcers had been by zinc ionisation. 4. A girl, aged 22, with Proptosis of Left Eye. The eye could not be moved in any direction. Wassermann's reaction was negative. After exploration of the orbit, which was negative, immense swelling of the lids took place which had persisted for many weeks. 5. Case of Pituitary Tumour in a middle-aged woman. Bitemporal hemianopsia. Treated for a time by thyroid and pituitary extracts. Right eye became completely blind.—Cases were also shown by Dr. W. S. Porter, Dr. A. G. Yates, Mr. Herbert H. Emmerson, and Dr. Percival J. Hay.—Dr. A. Rupert Hallam showed a series of Skin cases and gave X ray demonstrations.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 7th, Dr. A. Freeland Fergus, the President, being in the chair.—Mr. J. Hogarth Pringle showed two patients operated on for Aneurysm—(1) subclavian; and (2) popliteal.—Mr. J. H. Pringle and Professor W. K. Hunter showed a patient operated on for Acromegaly.—Dr. J. Goodwin Tomkinson showed cases of Coccogenic Sycosis under treatment.—The next meeting of the society was held on Feb. 21st in the new Clinical Laboratory of the Western Infirmary, where a pathological demonstration was given on work carried out in connexion with the laboratory.—Dr. J. Kerr Love, discussing Syphilis and Congenital Deafness, distinguished (1) post-natal deafness due to congenital syphilis, coming on during the school period, accompanied by keratitis, and characterised almost always by a positive Wassermann reaction; (2) congenital deafness due to congenital syphilis, indicating an extinct or nearly extinct blood infection, and often characterised by a negative reaction; and (3) hereditary deafness complicated by congenital syphilis, a type of deafness probably Mendelian in incidence, and one whose family history is not long disturbed by the introduction of syphilis. These three types were illustrated by numerous family trees.—Dr. C. H. Browning discussed the significance of the Wassermann reaction and some clinical applications.—Dr. W. Hislop Manson dealt with the reaction in ophthalmology.—Dr. H. Ferguson Watson stated some results he had obtained from reactions done in 1700 cases of children's diseases. Children suffering from true congenital heart disease all gave a positive Wassermann reaction, a proof of the syphilitic origin of the valvular lesions; while those exhibiting heart disease of the infantile type and of rheumatic origin all yielded negative reactions. Positive reactions were also obtained in all of 15 cases examined of meningitis with hydrocephalus, and in all of 85 cases, some apparently healthy, the children of tinkers, gipsies, and tramps.—Dr. T. J. Mackie demonstrated and discussed the occurrence of Gram-positive Bacilli in Pyogenic Infections of the Urinary Tract.—Dr. W. H. Kiep gave an account of the treatment of four cases of Typhus Fever by intravenous injections of salvarsan. In two of these (one severe and one mild) the course of the

disease appeared to be aborted by a single injection, but in the other cases (one severe and one moderately mild) the pyrexia resumed its ordinary course within 18 hours of the injection, and subsequent injections, given after an interval of one or two days, produced similar results.—Dr. G. A. Allan showed Microscopic Preparations from the Liver, Spleen, and Cerebro-spinal Fluid of a child who had died, aged 12 weeks, from tuberculous meningitis. The tubercle bacilli found presented on culture the characters of the human type, but by inoculation into a rabbit reacted like the bovine type.—Dr. J. Cruickshank discussed, with demonstration, the Detection of Tubercle Bacilli in Sputum, Urine, &c., by microscopic examination and culture, and their differentiation from other acid-fast organisms. —Dr. W. J. Logie discussed the Urea-Ammonia-Nitrogen Ratio of the Urine, and its significance in cases with glycosuria.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on March 7th, Mr. Henry Curtis, the President, being in the chair.—Mr. R. C. Elmslie read a paper on Treatment by Massage and Movement, especially in Relation to Fractures. He first briefly defined massage, and described its effects upon the circulation and upon the tissues, alluding to the idea of the French school of massage that a local analgesia with relaxation of muscular spasm could be obtained by regularly repeated centripetal stroking. The uses of various movements were then alluded to. The treatment of sprains, of an acute arthritis, and of fractures were then taken as illustrations. Under the treatment of sprains, Mr. Elmslie, after describing the ill-effects of the old-fashioned method of resting a joint until all effusion had disappeared, advocated immediate treatment by a compression bandage applied by the method described by Whitelocke, with early movement and functional use. He alluded also to the advantage of using strapping for support in cases in which there was a risk that weight-bearing might cause subsequent deformity. In the treatment of an acute arthritis, such as that due to the gonococcus, he thought that early massage and movement had been too much advocated, that it was likely to keep up the pathological processes, and to increase the final stiffness of the joint. He advocated a first period of rest, followed by massage and movement started as soon as the acute symptoms had subsided, and continued as long as there was any increase in the range of movement obtained, an anæsthetic being given if necessary to break down adhesions, and to determine whether it was worth while continuing the treatment. Under the treatment of fractures stress was laid upon the importance of limiting if possible the initial effusion, and of securing proper reduction of the deformity. It was pointed out that there was often little or no tendency to the recurrence of the displacement from the first, and that by analysing the cause of the displacement the probable tendency to such recurrence could be estimated. Massage should be carried out as soon as it could be done without running the risk of displacement. In order that this might be early it was as well that the surgeon should carry out the massage himself or should have it carried out under his personal supervision. Much of the opposition to the use of massage in the treatment of fractures was due to the custom of leaving the treatment to a masseur without any supervision.

METROPOLITAN ASYLUMS BOARD: INSTRUCTION IN HOSPITAL ADMINISTRATION.—A three months' course of lectures and demonstrations in hospital administration for the Diploma in Public Health will be given at the following hospitals: (1) Eastern Hospital, Homerton, N.E. (Dr. E. W. Goodall, medical superintendent), Tuesdays and Fridays at 2.30 P.M., beginning Friday, April 4th; (2) North-Western Hospital, Hampstead, N.W. (Dr. J. MacCombie, medical superintendent), Mondays and Thursdays at 5 P.M., beginning Monday, April 7th; (3) Grove Hospital, Tooting, S.W. (Dr. J. E. Beggs, medical superintendent), Wednesdays and Fridays at 5 P.M., beginning Friday, April 25th. The fee for the course is £3 3s. Medical men desiring to attend a course of instruction are required, before attending at the hospital, to pay the fee to the clerk to the Metropolitan Asylums Board, Embankment, E.C., giving their full name and address.

Reviews and Notices of Books.

A System of Surgery. Edited by C. C. CHOYCE, B.Sc., M.D. Edin., F.R.C.S. Eng., Dean of and Teacher of Operative Surgery in the London School of Clinical Medicine (Post-Graduate), &c. Pathological Editor, J. MARTIN BEATTIE, M.A. N.Z., M.D., C.M. Edin., Professor of Bacteriology in the University of Liverpool, and Bacteriologist to the City of Liverpool. In three volumes. Vol. II. With 18 coloured plates, 8 black and white plates, and 375 illustrations in the text. London, New York, Toronto, and Melbourne: Cassell and Company, Limited. 1912. Pp. 1105. Price 21*s.* net.

WE are glad to see this, the second, volume of a valuable treatise, and we find that it fully maintains the level reached by the first volume. The first article is by Mr. Sampson W. Handley, and it deals with the important subject of the breast. It could hardly have been entrusted to a more suitable writer, for Mr. Handley has devoted much attention to this branch of surgery, and has made some important contributions to the particular pathology and surgery. The article gives a useful account of the anatomy of the breast, and especially of its lymphatics, which have such an important relation to its surgery. The descriptions of all the diseases of the breast are good, but the best is that of carcinoma. The coloured plates show very clearly the mode of spread of carcinoma, as was first clearly pointed out by Mr. Handley himself. He advises lymphangioplasty for most cases of lymphatic œdema of the arm, but he considers it unsuitable for those cases in which general anæsthetics cannot be borne, and where there is growth about the shoulder.

Mr. C. Gordon Watson has written on the surgery of the spleen, and Mr. Cyril A. R. Nitch on the malformations of the face, lips, and palate. Mr. Nitch considers that the "prognathion" should be removed if it is rotated forwards at a right angle, but even in the worst forms the traction of the remade lip will suffice gradually to bring the premaxilla back to its normal position. The choice of operation for cleft palate is carefully discussed, and the author concludes that Langenbeck's operation, performed between the ages of 2 and 3 years or earlier if the conditions are favourable, gives the best results in the majority of cases. Mr. W. H. Clayton-Greene is responsible for the section on the surgery of the tongue, and he has given an excellent account thereof. He holds that in all cases of carcinoma of the tongue the entire half of the tongue must be removed down to the hyoid bone if the growth is situated laterally, and the entire organ when the disease is situated centrally. The surgery of the salivary glands is dealt with by Mr. Ivor Back, and that of the œsophagus by Mr. H. M. Rigby; both these articles contain many good illustrations.

One of the most important contributions to the volume is the account of the surgery of the stomach and duodenum by Mr. James Sherren, of which the most interesting portion is that dealing with the operation of gastro-enterostomy. The author agrees that the posterior operation is to be preferred, but he expresses a high opinion of a modification of the anterior operation which he devised in 1904, in which no loop is left. This he has performed 26 times, and in all the cases the convalescence has been as smooth as with the posterior operation. Mr. Alexander Miles has written a very interesting account of the surgery of the small intestine, which occupies more than a hundred pages, and Mr. Percy Sargent has contributed the description of the surgery of the appendix and of the peritoneum. Mr. Lawrie H. McGavin has supplied the article on hernia, in which a useful account is given of the method of making wire

filigrees; Mr. H. S. Clogg has contributed the section on the rectum and the anal canal; while Mr. G. Grey Turner is responsible for the account of the liver, gall-bladder, bile passages, and pancreas, and Mr. J. W. Thomson Walker for that of the kidneys, bladder, and urethra. Mr. Russell J. Howard has supplied the account of the diseases of the male genital tract, and Mr. Victor Bonney has written the section on the surgery of the female genital tract.

It will be seen from this list of the names of the contributors that the editor has been very successful in obtaining experienced surgeons to supply articles on subjects on which they are especially qualified to write. The whole volume is well supplied with illustrations, and it may be regarded as a good example of British surgery of to-day.

Butterworth's Workmen's Compensation Cases. Vol. V., New Series. Being a continuation of "Workmen's Compensation Cases," Vols. I.–IX., edited by the late R. M. MINTON-SENHOUSE, Esq., of the Inner Temple and Midland Circuit, Barrister-at-Law, containing Reports of every Case heard in the House of Lords and Court of Appeal, England, and Selected Cases heard in the Irish Court of Appeal and Scottish Court of Session, decided under the Workmen's Compensation Acts during the period October, 1911, to October, 1912. Edited by His Honour Judge RUEGG, K.C., and W. DOUGLAS KNOCKER, Esq., of the Middle Temple and South-Eastern Circuit, Barrister-at-Law, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., D.P.H. Lond. London, Sydney, and Calcutta: Butterworth and Co. 1912. Pp. 772. Price 7*s.* 6*d.* net.

THE above ample description, derived from the title page, indicates sufficiently the nature of Butterworth's Workmen's Compensation cases, of which annual publication, moreover, this is the fifth instalment, and it retains the characteristics of its predecessors.

The law of Workmen's Compensation under the Act of 1906 continues to be built up by judicial decisions of the Court of Appeal and House of Lords, the annual output filling a substantial octavo volume of obvious usefulness to members of both branches of the legal profession concerned with this particular branch of litigation. Medical men, also, who may have to do with workmen's compensation as expert witnesses or as medical referees cannot fail to find useful some knowledge of the principles of law which will be applied to the facts with which their evidence is concerned. In a great many cases, of course, the crucial point to be decided has no aspect of medical interest, as in the class which supplies the largest number of disputed points of any, according to the classification adopted in Butterworth's case. We refer to cases turning upon whether the accident alleged was one "arising out of the employment" in which the workman was engaged. Many and various have been the injuries which since the passing of the Act have been ascribed to this prolific source, not always with success. A workman, according to a case argued in the Court of Appeal quite recently, took off his socks before proceeding to work upon a wet floor, and according to his story in so doing strained the tendon of his middle finger and became incapacitated. The county court judge held that the accident did not arise out of the man's occupation, and the Court of Appeal was of opinion that there was evidence to support his finding. Many who are not eminent judges will agree with Lord Justice Buckley that the workman's case in this instance was so extravagant that it is not easy to deal with it seriously.

The prominence of medical evidence and of topics in which medical men are directly interested is more marked where the reviewing, ending, diminishing, or increasing of weekly payments is concerned; or where such questions are raised as whether the incapacity for work results from the injury alleged, or whether a workman may refuse to submit himself to medical examination on behalf of his employer unless his own medical attendant be present. This last question, often raised, may be regarded now as fairly settled. The workman has no right to make such a demand when he pleases, but it is a question of fact for the arbitrator to decide whether in the circumstances of the particular case the condition may be reasonable.

Medical practitioners, in the opinion of some people, should not concern themselves with the probable result of any answer that they may give as witnesses, or with the object for which a particular question may be asked. This may be true up to a certain point, but there is much to be said in favour of the opposite view, that they will be better witnesses so far as the administration of justice is concerned if they have some idea of the law and of the nature of the facts material to the establishment or the defeating of a claim for compensation.

LIBRARY TABLE.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second series. Vol. XVII. Suaheli—Testut. Washington. 1912.—The seventeenth volume of this second series of the Index Catalogue continues to show all the characteristics of profound, patient, and accurate scholarship that have long since made this work a treasure-house of information for innumerable medical authors and workers in original research. In this volume, under the heading "Surgeon-General's Office (Library of the)—Texts Illustrating the History of Medicine in the," we find no less than 90 double-column pages of works, catalogued under the following principal headings, with sub and sub-sub headings: Pre-Hippocratic Medicine; Greek and Graeco-Roman Period [460 B.C.–476 A.D.]; Byzantine Period [476–732 A.D.]; Mohammedan and Jewish Periods [732–1096 A.D.]; Mediæval Period [1096–1438 A.D.]; Renaissance Period [1438–1600 A.D.]; The Seventeenth Century; The Eighteenth Century; Modern Period. In the later of these divisions the epoch-making or characteristically illustrative works are grouped under their appropriate medical sub-heads. Authors' original descriptions of operations, processes, diseases, therapeutic methods, and so forth can thus be expeditiously traced. Other subjects of which the literature is extensive are Suprarenal (33 pages), Surgery (115 pages), Symphysiotomy (12 pages), Syphilis (208 pages), Teeth (69 pages), and Testicle (30 pages). This work, therefore, is invaluable for the following purposes: To afford information as to the period of life of a given medical author of any period or nationality, and of his published works and contributions to the periodical medical press of any country; to look up editions and other details concerning particular works on medicine and allied subjects; to ascertain what books and articles in the periodical medical press of the entire world have been written on any particular subject; to identify particular medical writers having the same or similar patronymics; and to afford bibliographers assistance in classifying their own collections. It is a contribution in aid of science for which the United States Government deserves the thanks of the entire medical world—thanks which should be extended also to those officials of the Surgeon-General's Library by whose patient toil and conscientious accuracy the work is accomplished.

The Tropical Diseases Bulletin. Vol. I., No. 7. London: Baillière, Tindall, and Cox.—The Bulletin continues to maintain the high standard which it set upon its first appearance. Each month the reader has afforded to him the opportunity of perusing the numerous summaries of recent contributions to the literature of

tropical diseases published at home and abroad. In the mid-February number the maladies especially dealt with include kala-azar, malaria, relapsing fever, typhus fever, porocephaliasis, rat-bite disease, snake-bites, and lastly the so-called "cell-inclusions," to which Sir William Leishman lately called attention in connexion with blackwater fever. As regards kala-azar, Dr. C. M. Wenyon, who acts as sectional editor for this subject, summarises some 24 recent contributions upon this disease, a large number of them being by Italian investigators upon that form of leishmaniasis commonly met with on the shores of the Mediterranean. With reference to malaria, for which malady Dr. J. G. Thomson is the sectional editor, digests are given of 15 papers, and Dr. H. B. Fantham furnishes a summary of an investigation undertaken by Dr. J. G. Thomson in conjunction with Dr. S. W. McLellan on the cultivation of one generation of the malarial parasite by Bass's method, to which is added a note by Sir Ronald Ross. Relapsing fever is the next disease dealt with, and the sectional editor, Dr. E. Hindle, presents summaries of some 16 papers on the subject, giving also digests of seven others on typhus fever. Dr. G. C. Low supplies comments upon two papers published on porocephaliasis, or tongue-worm disease, in man, with illustrations showing the adult worm and its nymphal stage. Dr. Low also gives digests of three contributions on the subject of "rat-bite disease," and of four other papers relating to snake bites and their treatment. This sectional editor also offers some observations upon two articles upon "cell-inclusions," the first of these being by the German investigator Dr. Schilling-Torgau, concerning the origin and significance of Leishman's chrome-cells in blackwater fever, and the second by Dr. A. Castellani, entitled "A Note on Certain Cell-Inclusions' observed by him in Ceylon. These valuable and interesting summaries serve the purpose of bringing to the notice of practitioners in all parts of the world investigations carried out by experts and published originally, in many cases, in foreign languages, and therefore not ordinarily accessible to British medical men at home or in the colonies, seeking for the latest information regarding tropical diseases.

Educational Administration and Criticism: A Sequel to the Holmes Circular. By F. H. HAYWARD, D.Lit., M.A., B.Sc. With a Preface by JOHN ADAMS, LL.D., M.A., B.Sc. London: Ralph, Holland, and Co. 1912. Pp. 592. Price 7*s.* 6*d.* net.—This book, the work of a prominent educationist, is a counterblast to the memorandum issued by the chief inspector of elementary schools in 1910, wherein the advisability of appointing as local inspectors men who have received an Oxford or Cambridge education, rather than ex-elementary teachers, is very strongly advocated on account of the alleged superior fitness of the former. It is not surprising that so anti-democratic a manifesto should have evoked a storm of protest. In Dr. Hayward the claims of the elementary teacher to administrative recognition and promotion find a champion of fiery eloquence and zeal. He regards the Holmes circular as an "infinitely pernicious" document. His first three chapters are devoted to a biting analysis of its psychological presuppositions; and throughout the book he recurs at frequent intervals and with undiminished ardour to the same congenial theme. He has a soft spot in his heart for inspectors and lay administrators, holding the optimistic view that even officials are "somehow good." Besides, they are indispensable in a bureaucracy, which appears to be Dr. Hayward's ideal human estate. The notion that men can be capable of doing their best work without having it criticised, supervised, and regulated, appears to him preposterous; his unconcealed resentment of the fact that medical men are not yet liable to systematic inspection reminds us of the anti-tail propaganda of the fox who had left his own brush in a trap. This grievance evidently rankles; accordingly, all Dr. Hayward's choicest specimens of "professional egoism" are culled from the medical sphere. He even asserts, but without adducing a shred of evidence in support of the statement, that "people are being maimed and murdered every day around us because a doctor's blunders are allowed to pass without comment; because he is practically irresponsible." When the author forgets his prejudices he has many interesting and stimulating suggestions for the reform of education, but he does not in our judgment prove the Holmes circular to be any of the hard things which he says. His "fundamental idea" is, he tells us, "that every official proposal and every official act shall be somewhere *placed on record*." But the book lacks unity and compression. For example, the above crucial statement appears casually on p. 405.

A Handbook of Sugar Analysis. By C. A. BROWNE, Ph.D. New York: John Wiley and Sons. London: Chapman and Hall, Limited. 1912. Pp. 787 + 101 + lxxxi. Price 25*s.* 6*d.* net.—This is a book which is primarily intended for use in research, technical and control laboratories. The author is the chemist in charge of the New York Sugar Trade Laboratory, a post which must obviously bring him considerable experience of the sugar industry and of the product itself. Great strides have been made in recent years in regard to the refinements of analytical methods directed to the valuation of sugars, the field having now been given over to the expert or specialist. The book will be valuable to the general analyst, who naturally seeks for guidance from those who have given their whole attention to the subject. For the medical reader the interest of the book lies in the detailed description of the methods of analysis of sugars and of their properties when required for a particular purpose. The book bears the stamp of authority, is an important addition to the literature of the subject, and a valuable source of reference to the technologist.

THE SECOND INTERNATIONAL "FIRST-AID" CONGRESS.—The British sectional committee of this congress, which is to be held at Vienna on Sept. 9th-13th, 1913, is as follows:—President, the Earl of Londesborough; Vice-President, Lord Claud J. Hamilton; Committee, Sir James R. Andrew Clark, Sir J. L. Langman, General Sir R. Baden-Powell, Sir George T. Beatson, Sir John Furley, Mr. R. Blair, Mr. J. Cantlie, Colonel Guy Carleton Jones, Mr. T. Duncombe Mann, Mr. H. S. Folker, Dr. W. E. Garforth, Mr. Lynn Thomas, Mr. E. O. Sachs, Dr. F. M. Sandwith, with Mr. S. Osborn as Secretary. An outline of the programme was given in THE LANCET of Jan. 18th, p. 186.

CAXTON CONVALESCENT HOME, LIMPSFIELD, SURREY.—The annual meeting of the Caxton Home for Convalescents in the various trades and callings connected with the great printing industry was held on Saturday, March 8th, at the St. Bride Foundation Institute. The chair was occupied by Mr. C. J. Drummond, president and chairman of the managing board. There was a good attendance of representatives. The report states that 140 patients availed themselves of the Home in 1912, and that with few exceptions they derived great benefit from their stay, and concludes with an earnest appeal for funds to enable the trustees to liquidate the debt which is at present hampering the usefulness of this valuable institution. The resignation through ill-health of the secretary, Mr. E. J. Carr, was received by the representatives with many expressions of regret. Three candidates for the office were nominated, Mr. S. J. White being duly elected. The report was unanimously adopted, the committee and officers elected, and a vote of thanks to Mr. C. J. Drummond passed by acclamation for his conduct in the chair. Communications and donations should be addressed to the secretary, at the London office, 3, Cursitor-street, E.C.

THE LANCET.

LONDON: SATURDAY, MARCH 15, 1913.

The Vital Statistics of London.[1]

THE vital statistics of London for the year 1911, as they appear in the lucid and able report of Dr. W. H. HAMER, medical officer of health of the County of London, afford on the whole satisfactory reading. Progress is shown in many directions, and an amount of strenuous effort is chronicled deserving of the highest praise. The population of London declined slightly during 1911; the marriage-rate was higher and the birth-rate was the lowest on record. 56,939 males and 54,799 females were born, giving a birth-rate of 24·8 only. During the 50 years between the 1861–1870 decade and 1911 the birth-rate per 1000 persons living has declined in London to this figure from 35·4, a fact which can only be regarded as serious, whatever interpretation be put upon it. This decrease in the birth-rate is shared by the other chief towns of England, the rate in Liverpool, Manchester, Birmingham, Leeds, Sheffield, Bristol, West Ham, Bradford, Hull, Newcastle-on-Tyne, Nottingham, Stoke-on-Trent, Portsmouth, Salford, and Leicester being lower than the rates of the previous quinquennial period. The London figures are corrected by the exclusion of births within the county to mothers not usually resident in London, and this is a proceeding which, if followed out in the case of other towns, might lead to considerable modification of the figures. As a matter of fact, the London birth-rate compares favourably, not only with the rates of many other English towns, but also with those of some of the most important foreign capitals. Dr. HAMER takes for comparison Paris, Brussels, Amsterdam, Copenhagen, Stockholm, St. Petersburg, Berlin, Vienna, and New York. The London birth-rate is the same as that of Copenhagen, considerably greater than that of Paris and Brussels, greater than that of Berlin, Vienna, Amsterdam, and Stockholm, but less than that of St. Petersburg (28·2) and of New York (27). Shoreditch occupies pride of place among the metropolitan boroughs with a birth-rate of 31·9—a figure which is reminiscent of the "eighties."

The death-rate of London in 1911 was 15 per 1000 of the estimated population, the figures on which this rate is founded having been fully corrected for institutions by the exclusion of deaths of persons not belonging to, but occurring in, institutions situated within London, and by the inclusion of deaths of persons belonging to London, but occurring in London institutions situated outside the administrative county. It should be noted that for the year 1911 the rates are further corrected by the inclusion of non-institutional deaths of London residents occurring in the outer ring of greater London. A death-rate of 15 is very satisfactory. It is higher than the death-rate of 1910, and rather higher than the death-rate of 1908, otherwise it is the lowest death-rate on record. Again comparing the condition which prevailed 50 years ago, we find that the death-rate of London has declined from 24·4 in the 1861–1870 decade to 15 in 1911, the lowered death-rate compensating for the lowered birth-rate, though not in a way that brings entire satisfaction. Compared with the great English towns, the names of which have just been enumerated, the corrected death-rate of London is lower than any death-rate except that of Bristol, of Portsmouth, and of Leicester, while compared with the death-rates in the foreign capitals it is, or was in 1911, higher than that of four cities—viz., Brussels, Amsterdam, Copenhagen, and Stockholm—but lower than that of Paris, Berlin, St. Petersburg, and Vienna, and fractionally lower than that of New York. The figures for London and New York for 1912 continue to show a gratifying decrease.[2] Amsterdam sustained during 1911 a very unusual death-rate for a large commercial capital—viz., 12·4. Of the metropolitan boroughs in the year 1911, Shoreditch (21·1) had the highest death-rate as well as the highest birth-rate, displacing Finsbury, although Finsbury had the highest in the preceding quinquennial period. Hampstead (10·9), as in the previous quinquennial period, had the lowest death-rate in 1911. The infantile mortality of London for 1911 was 129, being lower than that in any large English town save Portsmouth (126) and the suburbs of London (124). Comparison with the figures for infantile mortality in foreign capitals is difficult to make as the number of living births cannot be ascertained for certain.

The principal epidemic diseases which have afflicted London during 1911 were measles, scarlet fever, diphtheria, whooping-cough, and typhoid fever. During the year 4445 persons died from one or other of these diseases, including small-pox. The annual death-rate for the year from epidemic diseases was higher than that of Manchester, Leeds, Bradford, Nottingham, Salford, Portsmouth, and Leicester. Epidemic diseases appear to have been kinder to the inhabitants of foreign capitals than to London during 1911, the figures for Paris, Brussels, Amsterdam, Copenhagen, Stockholm, Berlin, Vienna, and New York all being better, St. Petersburg alone being worse. It is fairly certain that in some of these cities there is nothing like the same accuracy in notification that prevails in London. Nine deaths occurred from small-pox, 72 cases having been notified; 63 of these occurred during February and March, 40 of them being in Stepney, where there was a sharp outbreak. London is less vaccinated than ever, and apprehensions of an outbreak like that which occurred in 1902 are necessarily grave. The deaths from measles during 1911 numbered 2570—Stepney, Poplar, and Wandsworth being specially attacked. The measles death-rate in London during 1911, compared with the death-rate from the same cause in the other large English towns, was the

[1] The Annual Report of the London County Council for 1911, Vol. III. (including the Report of the Medical Officer of Health of the County, the Report of the Medical Officer for Education, Main Drainage, Housing of the Working Classes). P. S. King and Son. Price 2s. 6d.

[2] THE LANCET, Jan. 25th (p. 271) and Feb. 8th (p. 419), 1913.

highest save in two cases; Birmingham had the same figure, and worse figures were shown by Sheffield and West Ham, which is practically a continuation of London. But, as showing the extraordinary change in the comparative seriousness of scarlet fever and measles, more than 10,000 cases of scarlet fever were notified in the administrative county of London during 1911 with 172 deaths only. The mild character of the disease caused difficulty in many places in tracing the origin of local prevalence. Of enteric fever 1022 cases were notified during 1911 with 144 deaths, figures that are quite favourable by comparison with those of the immediate past and which there is every reason to believe would look well beside the figures of foreign capitals. To other features of Dr. HAMER'S interesting report, and to the report of the Medical Officer for Education, Dr. JAMES KERR, we shall refer later.

The Problem of Tuberculosis.

THE Final Report of the Departmental Committee on Tuberculosis, which appeared at the beginning of the week, accompanied by a most valuable appendix, is an illustration of the manifold directions in which a responsible group of public men, assisted by some of our most thoughtful, experienced, and representative authorities, are prepared to recommend that the rulers of the land should deal with the problem of tuberculosis. The Committee were commissioned to report at an early date upon the considerations of general policy in respect of the problem of tuberculosis in the United Kingdom, in its preventive, curative, and other aspects, and their guidance of the Government and local bodies "in making or aiding provision for the treatment of tuberculosis in sanatoria or other institutions or otherwise" (to quote the terms of reference) seems to us brave and judicious. With a scope of such width it is not surprising that some thoroughly valuable and practical information has been collected by the Committee, who have founded upon this information a report which is wise, clear, and also commendably brief. An Interim Report, it may be remembered, mainly concerned with the machinery for the treatment of the disease, recommended the formation of two units, the one comprised of the dispensaries and the other of sanatoriums and hospitals, so that in this way institutional and domiciliary treatment might be brought into intelligent touch; and classification, prevention, and cure might proceed along systematic and properly connected lines. The Committee thought that a tuberculosis dispensary should be provided for every 150,000 or 200,000 of the population—i.e., that at least 250 such dispensaries would be required, and accepted the usual view that there should be available one bed in a sanatorium for every 5000 of the population, economy dictating that each sanatorium should contain at least 100 beds. The definition of sanatorium treatment in the Interim Report was broad, it being considered that at some time or another in the course of the disease a large proportion of tuberculous cases, whether pulmonary or other, would require treatment for varying periods within an institution. The Interim Report was clearly demanded by the necessity to prepare for the sanatorium treatment of persons insured under the Act; the Final Report treats the whole problem in a larger way. It will not escape criticism in one direction, where it is possible that the views expressed will not receive complete endorsement.

Since the publication of the Interim Report the Government has decided to place at the disposal of the Local Government Boards, and in the case of Wales at the disposal of the Welsh Insurance Commissioners, a sum of money representing approximately half the estimated cost of treating non-insured persons, as well as the dependents of insured persons. This step was taken by the Government in direct accordance with the views expressed by the Committee, and we congratulate them on having secured a most important and needed concession. The National Insurance Act, of course, made no provision for uninsured persons, while the omission of a section of the population from the national scheme for the treatment of tuberculous persons endangered the success of the whole endeavour. The Government has shown a fine acquiescence in scientific opinion as well as a very earnest intention to promote the public health of the country by thus closing a dangerous gap in our sanitary defences. A second change in the administration of sanatorium benefit was the granting by the Chancellor of the Exchequer of the "tuberculosis sixpence," to be paid as a capitation grant on all insured persons to the general practitioner in return for domiciliary treatment. This piece of finance has not been universally popular with the medical profession, some of whom had already made better pecuniary arrangements for their share of the treatment of tuberculous subjects with local authorities before Mr. LLOYD GEORGE'S concession was mooted; but the Committee approve it as a method of enlisting the coöperation of the general practitioner in the schemes for dealing with tuberculosis, even though the funds available to do all the work appear to be pledged to an anxious extent.

But by far the most interesting feature of the report is the formulation by the Committee of a plan for a permanent bureau under the auspices of which a comprehensive scheme of research could be carried on. Under the provisions of the National Insurance Act a sum of money now amounting to £57,000, and destined to rise to a larger figure, may be retained yearly by the Insurance Commissioners out of the money provided by the State, and employed for the purpose of research. This sum the Committee, while finding that it could be employed in research into the pathology of any disease which may affect insured persons, are of opinion could be usefully spent in connexion with tuberculosis; and we think, as the Committee think, that in the first instance the money should be allocated in this way. The unanswered questions in connexion with the origin and infectivity of tuberculosis are very numerous, if only because of the wide prevalence of the disease, the multiplicity of forms in which it makes its appearance, and the vastly differing factors which influence its spread. Research into the pathology of the disease and into the effective measures to be taken by the State for its prevention must therefore necessarily cover a wide field. It "should include inquiries of a clinical, pathological, experimental, statistical, and sociological character," to quote and heartily commend the

exact words of the Committee; and it may be asked how better can such inquiries be carried on systematically, and with the minimum of waste from overlapping and reduplication of work than by the institution of a permanent bureau? While every sanatorium and dispensary brought into line with the organised and coöperative efforts of the nation will in time possess facilities for pathological and laboratory work, or access to these facilities, it seems essential that some central organisation should be created to correlate results, to direct work into particular lines where a valuable return may be expected, to employ special assistance for special purposes, to keep our workers in touch with the workers in foreign laboratories, and generally to advise the Government as to the best possible use of the money forthcoming.

The recommendation of the Committee that such a bureau should be founded and supported almost follows from the advice which they received during their deliberations. But this, the first effort made by the Government of our country to endow medical research, may be received coldly at first through distrust of the centralisation of work inherent in the scheme. The proposed governing body of the bureau is large, and the problem of tuberculosis so special, that the danger of stifling independent research need not, we think, be feared, but criticism (to which we have alluded above as imminent) will be directed towards the amount of centralisation actually contemplated. In a full abstract of the Report of the Committee, which appears in the current issue of THE LANCET (see p. 771), will be found the views of the Committee upon the expenditure of money in the cause of research, and, so far as they recommend the establishment of a central bureau for purposes of the coördination and correlation of work done, there will be no dissenting voices. But there is a strong feeling that a great deal of the money available for the purposes of medical research, whether into tuberculosis or into any pathological condition common to the insured population, could with advantage be employed in subsidising the laboratories, medical schools, and research institutions already in existence, while grants in aid could be made from the bureau in directions where special research is needed and to workers in places where particular problems can best be studied—the last procedure has already been proved sound in connexion with the Developments Grant to British Agriculture. It is an open secret that there is a strong difference of opinion as to the relative value of the work which the country would obtain under the two policies, namely, the foundation of a new institution for research and treatment, or the support of existing institutions; while the Report of the Committee does not indicate in which direction their corporate bias lies. The matter will probably resolve itself into one of money. The Committee in more than one place in their Report show uneasiness as to the money available being sufficient to carry out their recommendations, and inquiry will thus proceed towards discovery in which direction economy coupled with practical results will more probably lie. It is the unhappy fate of many questions of the first interest to science and public health to receive their answers from the accountant.

Annotations.

"Ne quid nimis."

THE MINISTRY OF PAIN.

THE existence of pain and other forms of evil, real or apparent, together with that of an all-wise and all-powerful God, is a problem which has always exercised the human intellect, a problem at present insoluble. Facts being as they are, the mind can only set itself to consider that the existence of evil is in some way necessary for the right apprehension of good, and that evil, or what we call evil, is really an educative and disciplinary manifestation of the Divine will. The permission of evil is an all too evident fact; but just as in the physical world poisons and the forces of Nature can be and are used for the benefit of the human race, although all capable of working irreparable injury, so pain and suffering may be considered to be capable of bringing about an evolution of higher things in life, whether physical, moral, or spiritual. The problem is considered in a paper now before us, written by Dr. E. M. Merrins, of Wuchang, China, who is presumably a medical missionary.[1] Dr. Merrins does not attempt to answer the insoluble problem of why pain is allowed, but only seeks to show that it is a factor in the evolution of life; "suffering being accepted as a law of life, in the same way that we recognise gravitation to be a law of the physical world, its beneficent effects can be traced, though the problem cannot be solved completely." Though there is nothing original in this paper, yet it is a valuable collection of examples of how suffering has raised the race. Every medical man knows the value of pain as a protective agency of the human body, and how the higher and more complicated the organism the greater is the sense of pain. So in the human race as a whole, the wars, the famines, the epidemics which have from time to time afflicted it have led not only to cruelties, cowardice, and sorrow, but to the manifestation of the highest qualities of human intellect, to a showing forth of that *divinae particula aurae* which Horace recognised as present in man. There are few, if any, more pathetic lines in the whole of literature than those in which Lucretius[2] has commemorated the self-sacrifice of the attendants on the sick in the great plague at Athens:—

> Qui fuerant autem praesto, contagibus ibant
> Atque labore, pudor quem tum cogebat obire
> Blandaque lassorum vox mixta voce querellae.
> Optimus hoc leti genus ergo quisque subibat.

"In this way died many a one of the best." Dr. Merrins well likens sufferers to pioneers who lay down their lives in opening up new lands. Our country, and not ours alone, has recently been thrilled by the account of Scott and his comrades. When Oates dragged his weary body out of the tent to die alone that he might not further distress his comrades he set an example by suffering which will ever be a light to guide and exhort others. Why suffering should be allowed, we know not, but that it can ennoble both the sufferer and his fellow-creatures is certain.

ANTHRAX IN THE WOOL TRADE.

THE danger of anthrax will continue to menace certain trades as long as animal products, collected under circumstances over which no supervision is maintained, are imported for manufacturing purposes. Unfortunately, there is no sign that the dissemination of knowledge and recognition of the dangers are having any marked effect

[1] The Ministry of Pain. By Edward M. Merrins, Wuchang, China. Reprinted from the Bibliotheca Sacra, vol. lxix., 1912, pp. 73.
[2] De Rerum Natura, vi., 1242.

in lessening the risk; nor have any practical means of disinfecting the goods as yet met with the approval of the trades concerned. In the wool trade there is again evidence of the efforts made to solve this question in the Report of the Bradford Anthrax Investigation Board for the year ending October, 1912. The large number of 1258 samples of wool were examined, and from these anthrax bacilli were cultivated on 84 occasions. In contrast to previous years a proportion of these were samples in which blood clots were not a marked feature, and therefore the opinion before held that danger was confined to this class of goods has had to be abandoned. The report briefly states that no disinfecting process has met with general acceptance. One of the main difficulties appears to be that while it would seem almost impossible to destroy anthrax spores by any but a "wet" method, all such interfere with the trade processes and would be disapproved by the manufacturers. It seems clear that the elimination of blood-clots from the fleeces, either in the country of export or in the factory, even if it were practical, would be little more than a palliative measure, especially in view of the recent findings of the Board, and that the only solution will be found in a satisfactory process of disinfection. The cases of anthrax that were notified in the wool trade during the past two years have been greater than in all the other trades together, and have also exceeded the average of the previous seven years. The case mortality was especially high in 1911, and yet during this time there has been no increase in the amount of goods imported, greater attention has been paid to precautions in connexion with the handling of goods scheduled as dangerous, and the most recent methods of treatment have been available. There is here undoubtedly a field of research which holds out possibilities of very practical results.

ENTEROTAXIS.

THE heading of this annotation does not refer to a new disease, but to an old anatomical term, which we now find in no medical dictionary. Indeed, we have only discovered it in bygone French theses, where its exact meaning is obscure. It would seem, from the vague and lengthy description given of it by one writer, to refer to the arrangement of the viscera and to their displacement. Ancient medical nomenclature has often fallen into complete disuse owing to its lack of definiteness. Yet the medical men of the past held decided views about visceral displacement, and in the bills of mortality to a late date in the eighteenth century "The Rising of the Lights" was solemnly given as a frequent cause of death. What this disease may have been it is impossible to guess. "Rising in the Body" is put down as a distemper in cattle in Bailey's Dictionary as late as 1737, and perhaps the term is still used by some farmers. It may be that this cattle disease was kindred to "the rising of the lights" and to pathological enterotaxis. The non-medical world held extravagant views as to the possible migration of the vital organs within the body. Old Lord Neaves, referring to the illness of the Marquis de St. Just, an ancestor doubtless of the notorious member of the Salut Public Committee, wrote a witty epigram to this effect:—

> A certain statesman, found to have the stone,
> Was doomed to undergo an operation;
> Amongst his friends, the fact becoming known,
> Occasion'd much remark and conversation.
> "How came he by this ailment?" some one cried,
> "I scarce know anything that could be sadder."
> "The explanation's clear," a wit replied,
> "His heart has just slipp'd down into his bladder!"

A French version of this may possibly be familiar to readers of memoirs of the pre-Revolutionary epoch. To our ancestors a journey by the heart into some adjoining cavity appeared quite feasible, and that in a physical, not metaphorical, sense. The penetrability, or, at least, accessibility, of the bladder was believed in by the ancients, for we find Soranus of Ephesus gravely suggesting that stone might be gnawed into dust by a mouse. The *mus*, however, in this case might be a lithotritic instrument. Displacements of the intestines play an important part in the Scriptures as a cause of death. Thus Jehoram died, after two years, of a disease of the bowels, which "fell out by reason of his sickness." Judas Iscariot "burst, and all his bowels gushed out," when he fell headlong in Aceldama. The deaths of the very few Roman Emperors who died in their beds likewise suggest mysterious speculations. The historians, as recorded by Gibbon, leave us very much in the dark concerning them, but their entrails seem to have possessed, in the opinion of observers, remarkable travelling propensities. English rustics, in reciting the causes of death of parents or relatives, are often as vaguely inexplicit as the august ancients. Thus a rustic's mother, we have heard, died not long ago of the bowels gushing out of the mouth. This surely is a rarely observed set of conditions.

THE RESULTS OF OPERATIONS FOR TUMOUR OF THE BRAIN.

IN the *Transactions of the American Surgical Association*, a new volume of which has just appeared, Dr. W. J. Taylor contributes a paper on the ultimate results of operations for tumour of the brain. Very few statistics are available on this matter. Some operators report their successes so soon after the operation that it is not possible to place much reliance on the results obtained. In many cases of tumour of the brain it is impossible to localise the tumour with any great degree of accuracy, and when the skull is opened the tumour cannot be found. In other cases when the skull is opened the tumour is seen but it cannot be removed, and when these cases also have been put aside there remain the cases in which it is possible to remove the tumour more or less completely. Dr. Taylor's paper is based on 63 operations for tumour of the brain. In 33 the tumour could not be found at the operation, but the decompression gave great relief. In 30 cases the tumour was found and removed at operation, and in 14 of these the removal was complete. In 8 the tumour was only removed in part owing to its infiltrating character. In 8 cases cysts were found and drained. The operative mortality was very high; 6 patients died within the first five days, and 4 of these within the first 24 hours. One of these died from pneumonia in 17 hours and one from œdema of the lungs. Thirteen of those in whom a tumour was found and removed died within ten days of the operation. One case of cerebellar cyst died in five days as a direct result of the operation. Thus there were 19 deaths within ten days out of 63 cases—that is to say, a mortality of 30 per cent. As to the ultimate results, one case of cerebellar cyst is alive and well five and a half years from the date of the first operation, and three years from the date of the second operation, of draining the cyst. One case of glioma of the brain is living and comparatively comfortable three years since the first operation, and 18 months since the second operation; but there is a recurrence of the growth, and he will not live long. Three other patients are now living, but in these cases three years have not elapsed since the operations were performed. These results can hardly be described as very satisfactory, but probably they are as good as the end results of other operators. The result of this operation for removal of a brain tumour is sometimes so very brilliant that it is worth while for the patient to undergo the risk attendant on the operation, and even when it is not possible

to remove the growth the patient may regain the power of work for several years. Dr. Taylor lays great stress on the value of simple decompression in cases where the site of the tumour cannot be found, or where when found it is not possible to remove the tumour.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

WE are asked by the honorary secretaries to the Fund to state that hospitals in the County of London, or within nine miles of Charing Cross, desiring to participate in the grants made by this Fund for the year 1913 must make application before March 31st to the honorary secretaries, 7, Walbrook, E.C. Applications will also be considered from convalescent homes which are situated within the above boundaries or which, being situated outside, take a large proportion of patients from London. Sanatoriums for consumption which take patients from London or which are prepared to place beds at the disposal of the Fund for the use of patients from London hospitals are also invited to apply.

A TEST FOR MENTAL DEFICIENCY.

A BELGIAN physician, Dr. Demoor, has been making observations on the capacity of different people for judging which of two weights is the heavier, and has satisfied himself that while ordinary people, especially children, fail to appreciate a small difference, the reverse is the case with the imbecile, idiotic, and half-witted. He prepared two bottles, differing in size, partly filled with a heavy mineral but covered all over with black paper and exactly equal in weight. These he handed to 380 children of from 6 to 15 years of age. Of these 370 judged one bottle to be the heavier. The other ten said the two were the same weight. These ten children were all abnormal or degenerates.

THE ABUSE OF HYPNOTIC DRUGS IN AMERICA.

THE increase in the habit of self-drugging is going on in many parts of the civilised world. It is perhaps less marked in our colonies, where people live more natural lives, and is probably most pronounced in America. In our own country, and more successfully on the continent of Europe, it is kept in check by the proper administration of the several poison laws, but until further additions are made to the Poisons Schedule under the British Pharmacy law the sale of many narcotic drugs cannot be hindered with us. In the United States the sale of poisons is the subject of legislation in every State, some of which is very drastic on paper, but is not properly enforced. The United States Public Health Service has recently issued an official publication (Public Health Bulletin No. 56), in which figures are given to show the extent to which the drug habit has grown in America. This report states that since 1860, when the various forms of opium and its alkaloids were separately enumerated in the tariff schedules, there has been 351 per cent. increase in the importation and consumption of all forms of opium as against a 133 per cent. increase in population. During the last ten years there has been an annual importation and consumption in America of over 400,000 lb. of opium, and it is stated that fully 75 per cent. of this is manufactured into morphine, 80 per cent. of which, it is estimated, is used by victims of the drug habit. The report goes on to say that "in addition to the tremendous amount of opium unnecessarily consumed annually in the United States it has been estimated that 150,000 oz. of cocaine are illegitimately used each year," while in addition "hundreds of pounds, probably tons, of chloral and other hypnotic drugs are consumed annually by the people of this country, who, it has been asserted, are rapidly becoming hopelessly addicted to the habitual use of narcotic drugs of various kinds." The remedy for this abuse is not easy to find, but it is possible that much good might be effected by a greater uniformity in the poison legislation of the several States and by a more careful administration of it. The report also deals with other forms of legislation designed to protect the public health. The laws relating to the misbranding of drugs and foods are of comparatively recent origin, and the differences in the requirements with regard to the labelling of foods and drugs suggest the need for greater uniformity in the several State laws so as to provide for the ample protection of the public and yet avoid as much as possible unnecessary requirements that tends to hamper trade, increase the cost of production, and greatly enhance the cost of food and drugs to the consumer.

A QUESTION OF GRATUITOUS ASSISTANCE.

AT a recent meeting of the board of guardians at Saffron Walden a discussion took place with reference to the appointment of a chaplain to the workhouse, when it was suggested that a letter should be written to the vicar of the parish inviting him to perform the chaplain's duties without payment, and thereby save the rates the sum of £40 per annum. It was stated that several Nonconformist ministers were ready thus to act gratuitously with regard to members of their sects in the workhouse. A clergyman who was on the board, however, opposed the proposal on the ground that if the board demanded the services of any person it should be prepared to pay for them, and he asked with justice why a clergyman should be invited by laymen to exercise the duties of his profession for nothing, and why a similar invitation should not be issued to medical men with regard to medical attendance at the workhouse. We entirely agree with this comment upon an endeavour by members of a public body to exploit the charity of a professional man. Clergymen, like medical men, enter upon a profession of which the emoluments are small, and in which those occupying the worst paid positions are continually expected by laymen of a certain class to exercise their profession as if they were independent of any necessity to make money by it. Medical men and clergymen may, and do, make sacrifices and work for the love of their fellow men on many occasions, but they are entitled to select those occasions and the objects of their charity, and not to have it expected that, having joined beneficent professions, they must forego the right to earn their living.

GONOCOCCIC PERICARDITIS.

AT a meeting of the Société Médicale des Hôpitaux of Paris on Dec. 20th M. Albert Robin and M. Noel Fiessinger reported a case in which was observed a very rare complication of gonorrhœa—pericarditis. A man, aged 25 years, was admitted into hospital on Nov. 3rd, 1912. He had not suffered from any illness until the beginning of October, when he contracted gonorrhœa, which was treated by permanganate injections. The discharge contained numerous polynuclear cells and gonococci. On Oct. 30th the discharge diminished and he was seized with pain in the right foot. On the following day the left knee was swollen and painful. In 48 hours the left shoulder, right elbow, and right knee-joints were involved. On admission the general condition was bad, the temperature was 103·7° F., and the respiration was 30. The spleen was notably enlarged and the urine contained a large quantity of albumin. Gonorrhœal rheumatism with septicæmia and nephritis was diagnosed. On Nov. 3rd there was dyspnœa, but the arthritis was improving. In a few days the albuminuria diminished considerably. Examination of the heart and

lungs was negative. On the 5th the dyspnœa was increased and the patient complained of præcordial pain, which was increased by the slightest pressure. The cardiac dulness was not altered, but the first cardiac sound was muffled. The pain increased and pericardial friction was heard in the third left intercostal space a little before the first sound. The friction sound was not propagated and was increased by pressure. The first cardiac sound was muffled, but the second was accentuated. There was still no increase of cardiac dulness. On the 8th the friction sound was less marked, and percussion, always very painful, showed that the area of cardiac dulness was increased. It extended to the left as far as an oblique line running from the second intercosal space above the nipple to the fifth intercostal space, and on the right side it extended beyond the border of the sternum. At the base of the left lung there was an area of dulness of the breadth of the hand, with abolition of respiratory sounds. Blood examination showed hæmoglobin 85 per cent., red corpuscles 4,100,000, and white corpuscles 14,100. A differential count gave polynuclear neutrophiles 82 per cent., polynuclear eosinophiles 0·5 per cent., lymphocytes 6 per cent., and large mononuclears 1·5 per cent. On the 11th the gonococcus was cultivated from the blood. On the 14th exploratory puncture was performed at the base of the left lung and proved negative. On the 15th the patient was breathless and had passed half the night in the sitting posture, so as to breathe easier. The cardiac dulness had not altered. The cardiac sounds were muffled and the friction sound had disappeared. Under local anæsthesia the pericardium was punctured at Marfan's point (to the left of the base of the xiphoid cartilage). The pericardial cavity was easily entered and 50 c.c. of deeply coloured, very] fibrinous liquid were obtained. On centrifugalisation the deposit showed numerous polynuclears and some mononuclears and red corpuscles. No gonococci could be found and cultures remained sterile. The breathing was greatly relieved by the removal of this small amount of fluid and the pulse was much improved, but the cardiac dulness was little altered. On the 16th the dyspnœa recurred, but was less intense. On the 18th the cardiac dulness had considerably diminished and the friction sound had reappeared. On the 19th there was considerable improvement; the patient suffered less and the dyspnœa was diminished. On the 25th the cardiac dulness was almost normal. Complete recovery followed. M. Robin and M. Fiessinger attributed the signs observed at the left base to compression of the lung by the pericardial effusion.

THE LIVINGSTONE CENTENARY AND LIVINGSTONE COLLEGE.

ON Wednesday next, March 19th, the anniversary of the birth of David Livingstone will be honoured throughout the world by the English-speaking peoples. In the Albert Hall, London, the Archbishop of Canterbury will preside over a national gathering, and a great provincial demonstration will be held at Sheffield under the presidency of the Lord Mayor of that city, with the Archbishop of York as the principal speaker. At Glasgow University and at Edinburgh arrangements have been made for large gatherings of people, as well as in Australia, America, and South Africa, to do honour to the memory of the great explorer and missionary. At St. Paul's Cathedral and at Westminster Abbey special services will be held on March 26th. One object of the centenary celebration will be the quickening of interest in foreign missionary work, especially in the establishment of medical missions in Africa, and it is felt by the authorities of Livingstone College, which was founded in the year 1893 in order to give instruction to foreign missionaries in the elements of medicine and surgery, and which constitutes a permanent memorial to Dr. Livingstone in the neighbourhood of London, that the occasion of the centenary is one when the public may be glad to unite in support of a memorial which could not fail to be in accordance with the wishes of Dr. Livingstone. The College, which is appealing for a sum of £10,000 in order to meet various needs and also to form the nucleus of an endowment fund, has issued an illustrated souvenir at the price of 6*d*. Livingstone College has not only assisted the various missionary societies by enabling missionaries to be located in places far from the services of a medical man, but has in many directions helped forward the cause of exploration and travel by the information which it has circulated concerning the laws of health and the prevention of disease in localities practically inaccessible to the ordinary needs of civilised man. We, therefore, warmly support the objects which the College has in view, further particulars of which can be obtained from the Principal, Livingstone College, Leyton, E.

THE SCHEDULING OF HYPNOTIC DRUGS.

THE pourparlers with reference to the scheduling of veronal and other hypnotic drugs have reached a further stage, and it is anticipated that at an early date the Privy Council will signify its approval of changes in the Poisons Schedule which have long been desired. The delay in making these changes in the schedule has been due to the difficulty experienced in finding a suitable form of wording, since the substance it is desired to schedule is sold under various trade names. The resolution adopted by the Council of the Pharmaceutical Society at the March meeting, after consultation with the Privy Council, merely mentions the trade names as examples, but at the same time brings in all substances of the diethyl-barbituric acid group. The resolution is as follows:—

That by virtue, and in exercise of the powers vested in the Council of the Pharmaceutical Society of Great Britain by Section 2 of the Pharmacy Act, 1868, as modified by Section 1 of the Poisons and Pharmacy Act, 1908, the said Council does hereby resolve and declare as follows:—

(*a*) That "Sulphonal" be removed from Part II. of the Schedule to the Poisons and Pharmacy Act, 1908, and that "*Sulphonal*" *and its homologues, whether described as trional, tetronal, or by any other trade name, mark, or designation,*
be substituted therefor.

(*b*) *That Diethyl-Barbituric Acid and other alkyl, aryl, or metallic derivatives of Barbituric Acid, whether described as veronal, proponal, medinal, or by any other trade name, mark, or designation; and all poisonous Urethanes and Ureides* ought to be deemed poisons within the meaning of the Pharmacy Act, 1868, as amended by the Poisons and Pharmacy Act, 1908, and ought to be deemed Poisons in the Second Part of the "Schedule of Poisons" to that Act.

This is the third resolution passed by the Pharmaceutical Council dealing with this matter, and there is good ground for believing that it will be acceptable to the Lords of the Council.

RUPTURE OF THE VAGINA DURING COITUS.

IN the *Archives of the Middlesex Hospital* for December Mr. Victor Bonney has reported a case of a very rare accident—rupture of the vagina during coitus. The patient was a multipara, aged 40 years, of alcoholic appearance, who was admitted with symptoms of peritonitis and a bloody vaginal discharge. In the posterior vaginal vault was found a hole, which would have admitted a man's thumb, leading into the peritoneal cavity. The vaginal walls appeared to be unusually thin and fragile, but the canal was not shorter than normal. Mr. Bonney suspected that the injury was due to an attempt to pass a foreign body into the uterus with the object of inducing abortion. However, on questioning, the patient admitted that while in liquor the night before coitus took place in the upright position and severe pain and considerable bleeding followed. She returned home in great

agony and remained in that condition until admission. Mr. Bonney opened the abdomen and found a clean tear through the anterior wall of Douglas's pouch about an inch from its floor. In the pelvis was a considerable quantity of blood and clot, and there was early generalised peritonitis. The blood was removed, the rent was sewn up with interrupted sutures, a large drainage tube was inserted through the lower end of the abdominal wound, and the remaining part was closed. Rapid recovery ensued. Mr. Bonney points out that ruptures of the vagina during coitus may be divided into two groups. In the first the injury is in the nature of a laceration and affects chiefly the lower end of the canal. It is usually the result of rape. The lower end of the vagina is much narrower than the upper, and therefore is the part most likely to give way when stretched. The tear is usually posterior or lateral and opens up the paravaginal tissue. Exceptionally it penetrates into the peritoneal cavity. This type of injury is not uncommon in the lower animals, especially mares. In the second group, of which the case described above is an example, the injury is of the nature of a perforation, and is produced, not by stretching, but by the direct impact of the penis. In the museum of St. George's Hospital is a specimen taken from a woman, aged 70, who had recently married a lifeguardsman and died soon after coitus. There is a rent passing along the upper 2 inches of the vagina and dividing the mucous membrane and underlying muscular coat. The rent deepens as it ascends, and on a level with the os uteri has broken through into the peritoneal cavity. The hole in the peritoneum is not quite large enough to admit the little finger.

THE PURIFICATION OF THE WATER OF SWIMMING BATHS.

IN an annotation in THE LANCET of Oct. 9th, 1909, we directed the attention of our readers to the manifest advantages obtained by treating swimming-bath water with small quantities of electrolytic fluid, a cheap disinfecting and oxidising fluid obtained by the electrolysis of magnesium chloride. The experiment was first tried on the dirty, used water in the baths of the borough of Poplar under the direction of the medical officer of health, Mr. Frederick W. Alexander, and the results foreshadowed a successful means of cleansing the water, freeing it from all taint and obnoxious odour, and particularly from its tendency to deposit an objectionable slime. A representative of THE LANCET visited the baths after the water had been so treated, and he expressed his satisfaction with the results. The process has now been continuously in operation for over three years, and further reports serve to confirm the previously favourable impressions. Although there is little direct evidence that public baths act as disease-spreading centres, mere common sense suggests the desirability of keeping the water as clean as possible. There are, at all events, pathological potentialities possible in a pond of unchanged water frequently used by bathers, and the heavy cost of constantly supplying fresh water for the bathers renders a cheap and efficient method of purification necessary. To some extent, a continuous aeration and filtration plant has been used with success, but the electrolytic fluid method appears to give the most satisfactory results. Recently a committee appointed by the Royal Sanitary Institute reported upon the question, and the members of this committee confess that they were much impressed with the good results obtained. The addition of the hypochlorite of magnesia solution was sufficient to give one part of free chlorine to every one or two million parts of water, when not only is the water sterilised, "but it is kept sweet and free from odour and there is no tendency in the water to the deposition of slimy sediments on the floor of the pond." It is not suggested, of course, that this treatment does away with the necessity of changing the water from time to time, but so long as it is in use (a week or ten days) the security is obtained of having it fresh and free from harmful organisms. This is clearly of importance when the class of persons bathing may easily include a number carrying considerable dirt.

A PECULIAR FEBRILE ILLNESS OCCURRING IN AN INDUSTRIAL SCHOOL.

IN the current number of the *Edinburgh Medical Journal* Dr. Charles McNeil and Dr. J. P. McGowan report the results of an inquiry which they made into a series of outbreaks of a peculiar febrile illness occurring at a boys' industrial school not far from Edinburgh.[1] Between the years 1900 and 1911 11 of these outbreaks had taken place, the duration varying from a few weeks up to several months. Cases could be classified into three groups according to their degrees of severity. The first group embraced cases of fulminant type, in which, for example, the boy went to bed apparently in good health and was found dead in the morning with blood and froth round his nose and mouth. A second group embraced cases of a disease resembling acute pneumonia, but distinguished by absence of typical sputum and grunting breathing, and by the irregular curve followed by the patient's temperature. The third group was one of seemingly abortive attacks, which might have been regarded merely as febricula if they had occurred alone, but which were evidently mild instances of the same infection. In all three types the onset was with headache, vomiting, and high fever, and signs of severe involvement of the nervous system in the form of delirium and coma were often encountered. The face and extremities were markedly cyanotic, the blood showed leucocytosis, and a trace of albumin was frequently detected in the urine. In fatal cases there was found after death enlargement of the thyroid gland, the epithelial cells of which were in a condition of marked hyperplasia. The lymphatic glands and the spleen were also enlarged, and the thymus was persistent in some instances. In pneumonic cases the consolidation of the lung was lobular in distribution. Bacteriological examination revealed the presence of pneumococci, either alone or in company with other unidentified organisms. The disease thus seemed to be a pneumococcal infection, and, like acute pneumonia, it was not contagious. Similar outbreaks of disease have been recorded from time to time in other industrial schools, and the affection is apparently peculiar to these institutions. The authors make the interesting suggestion that the fulminating cases were due to the existence in the patients of status lymphaticus, and that a similar coincidence may account for sudden deaths in other diseases such as scarlet fever. Careful examination of the inmates of the school showed that a large proportion of the boys suffered from enlarged tonsils and adenoids, from nasal discharge, and from a form of chronic conjunctivitis, while they also reacted with unusual vigour to von Pirquet's tuberculin test. This group of symptoms is held to be characteristic of sufferers from the lymphatic diathesis, which would therefore seem to be specially common among the boys at industrial schools, who are on an average less well-developed physically than boys of the same period of life in ordinary schools.

[1] THE LANCET, Jan. 25th, 1913, p. 246.

EXETER DISPENSARY.—The annual meeting of the subscribers of the Exeter Dispensary was recently held under the presidency of Dr. Henry Davy. The medical report stated that during 1912 the patients numbered 4654, as against 4918 in 1911. The financial statement showed an unfavourable balance of £215.

THE FINAL REPORT OF THE DEPARTMENTAL COMMITTEE ON TUBERCULOSIS.

THE Final Report of the Departmental Committee on Tuberculosis was published early in the week in two volumes. Volume I. consists of the report itself, and Volume II. of a series of valuable appendices taking the form of statements from well-known authorities on all the numerous scientific and social questions that arise when the systematic treatment of tuberculosis is under discussion.

The terms of reference of the Committee were: "To report at an early date upon the considerations of general policy in respect of the problem of tuberculosis in the United Kingdom, in its preventive, curative, and other aspects, which should guide the Government and local bodies in making or aiding provision for the treatment of tuberculosis in sanatoria or other institutions or otherwise," and the constitution of the Committee will be found in THE LANCET, Feb. 24th, 1912, p. 546. To the names then published those of Sir Stewart Stockman, M.R.C.V.S., and Mr. Albert Smith, M.P., have been added, while Mr. Arthur Henderson, M.P., resigned.

In a brief introduction the report summarises the Interim Report published in April, 1912, pointing out that since the presentation of that report two important changes have been made affecting the funds available for the campaign against tuberculosis. The first of these changes is the statement made by the Chancellor of the Exchequer, and contained in a letter of July 31st from him to Mr. Henry Hobhouse, Chairman of the County Councils Association, to the effect that the Government had decided to place at the disposal of the Local Government Boards (in the case of Wales at the disposal of the Welsh Insurance Commissioners) of the three kingdoms annually, a sum of money which would represent, approximately, half the estimated cost of treating non-insured persons, as well as the dependants of insured persons. This money is to be distributed by the Local Government Boards, in pursuance of regulations made by those departments, to local authorities which undertake schemes to be approved by the Departments, for the general treatment of tuberculosis in their areas. The second is the announcement that 6*d*. per insured person out of the 1*s*. 3*d*. provided by Section 16 of the National Insurance Act for sanatorium benefit will be applied to the remuneration of general practitioners for domiciliary treatment of tuberculous patients. The Report proceeds as follows:—

PRINCIPAL OBJECTS OF THE PRESENT REPORT.

10. Having regard to the nature of their Interim Report the Committee are of opinion that they cannot usefully add much to their recommendations with reference to the treatment of persons suffering from tuberculosis.

In the circumstances the Committee propose to deal in this report mainly with the measures which should, in their opinion, be taken for the prevention of tuberculosis in general with special reference to the questions relating to bovine tuberculosis and tuberculosis in children, and to a scheme for dealing with the annual sum of money available in the hands of the Insurance Commissioners under Section 16 (2) of the National Insurance Act for the purposes of research.

At the same time the Committee do not wish to be understood to mean that the question of treatment can be wholly divorced from that of prevention. It is desirable to state at once that, in their opinion, the two questions are very closely interrelated. Effective treatment leads to prevention, and effective prevention leads to diminished need for treatment.

PREVENTION.

11. Methods of prevention may be divided into two classes:—

(1) Those whose object is to prevent the entrance of tubercle bacilli into the human system.

(2) Those whose object is to prevent persons into whose system tubercle bacilli have entered from developing active disease.

These two classes of measures are not mutually exclusive, and it is highly undesirable that one class should be adopted to the exclusion of the other. The Committee are of opinion that it is idle to hope either that infection can be entirely eliminated, or that, apart from the discovery of some special process of immunisation, the resistant powers of human beings can be developed to such an extent that infection may be ignored. But there is good reason to believe that much may be done to reduce the incidence of tuberculosis on the lines of diminishing the existing amount of infective material and of increasing the powers of resistance in those who are exposed to infection. These two methods of preventing the disease should, therefore, be employed simultaneously.

Methods of Diminishing Infection.

12. Under this heading may be grouped all the measures which tend to diminish the sources of supply of infective material and those which prevent its dissemination. Broadly speaking, the most important of these measures are the elimination of tubercle bacilli from food, and the prevention of the spread of infection by persons already suffering from the disease.

Food.

13. The Committee deem it of great importance that every effort should be made to secure that the food of the country should be free from tubercle bacilli. The principal classes of food in which those bacilli are at present found are meat, milk, and milk products. With regard to the sale of tuberculous meat, the existing powers of local authorities, to which reference was made in the Interim Report, are probably adequate for the protection of the community against the dangers of infection from this source, and, provided those powers are effectively put into force, no further legislation may be necessary in that direction. With regard to the supply of milk and milk products, the Committee consider the question of such importance that they have devoted a part of this report exclusively to its discussion.

Infection by Tuberculous Persons.

14. The prevention of the spread of tubercle bacilli by persons already suffering from the disease is a question which is most intimately related to the treatment of those persons. One of the principal sources of danger at the present time is the existence of a number of persons in the more acute and advanced stage of the disease living in the intimate contact with their families and neighbours which is necessitated by the ordinary conditions of their lives. The danger is frequently increased by the carelessness of the persons affected and of those living in contact with them. The Committee are of opinion that by means of treatment and education the risk of infection by such persons can be very largely diminished. But they do not think that treatment and education will be sufficient to eliminate all dangers from this source, as they recognise that some of these persons are apt to neglect, or are unable to carry out the necessary hygienic precautions. It is true that most tuberculous patients who have been taught to live as much as possible in fresh air, to dispose in a proper manner of their sputum, and generally to observe the necessary hygienic precautions, are in a position to minimise or even to eliminate the risk to which their continued presence among uninfected persons may give rise. But there may be a danger in leaving such a person in his existing surroundings, particularly where, as is often the case, the person is living in crowded conditions which necessitate very intimate contact with the members of his family and others. Infection is frequently disseminated by persons suffering from advanced pulmonary tuberculosis who are in the habit of entering and leaving Poor-law institutions, having regard merely to their own convenience, and not to the interests of their family or of the community in which they live.

15. The Committee desire, therefore, to recommend, as an effective means of preventing the spread of the disease, the compulsory isolation of certain cases which are in a state of high infectivity, particularly in those instances where the patients' surroundings are such as to increase the risk of other persons becoming infected. At the same time they desire to recommend that isolation should be carried out with all possible regard to the feelings of the patients and of their families and friends, and that any powers of compulsory isolation and detention possessed by or hereafter to be conferred upon local authorities should be exercised with discrimination and only after those authorities are satisfied on thorough inquiry that the public interest requires them to be enforced in the particular instances under consideration. So far as may be practicable patients should not be removed to places difficult of access from their homes, and arrangements should be made to facilitate visits from their families and friends.

While recommending isolation in certain cases, the Committee do not wish it to be inferred that they desire in any way to minimise the importance of education and supervision as a means of preventing the spread of tuberculosis. There are many cases where isolation is quite unnecessary, and all that is needed is that the patient should observe certain comparatively simple precautions. But it is of the greatest importance that the patient should be properly taught what those precautions are, and, further, that some steps should be taken to ensure that those precautions, after being learned, are not forgotten or neglected. It is in this connexion that much valuable work may be done by voluntary care committees and visits from trained nurses or properly qualified health visitors working in close touch with the medical officer of health and the tuberculosis officer, and by lectures and the dissemination of literature on the subject.

16. The Committee think it most desirable to secure the systematic and thorough disinfection of premises which, there is reason to believe, harbour tubercle bacilli. They are aware that many local authorities are fully alive to their responsibilities in this connexion, but they think it well to emphasise the importance of this work as a factor which will lead to the diminution of risk of infection. Steps should be taken to secure that all houses, in which it is known that persons suffering from tuberculosis live, should be thoroughly disinfected at frequent and regular intervals. It is only by these means that the danger arising from desiccated tuberculous expectoration can be reduced to a minimum.

17. In connexion with the prevention of the spread of the disease by means of infection from one human being to another, the Committee wish to lay stress on the importance of early diagnosis of the disease. Quite apart from the fact that early diagnosis greatly increases the chance of ultimate recovery, there is no doubt that the detection of the disease in its early stage is an important factor in decreasing the danger of infection. In the early stages of the disease the infectivity of the patient is very much less than in the later stages. Patients whose disease has been diagnosed early can, in many instances, be prevented from becoming a serious source of danger to their neighbours.

The Committee are of opinion that the establishment of the dispensary system recommended in their Interim Report will do much to facilitate the early recognition of the disease. No effort should be spared, whether by way of research with a view to discovering new methods of diagnosis, or by the encouragement of the systematic and intelligent use of existing methods, especially in connexion with the observation and examination of contacts, to ensure that the existence of the disease should be recognised in its earliest stages.

Methods of Increasing Powers of Resistance.

18. Under this heading may be placed all measures which tend to raise the standard of living and environment of the community and thus to render the defensive forces of the body as strong as possible. *Ceteris paribus*, a healthy, sober, well-fed, well-clothed, and well-housed community is far less liable to infection from tuberculosis than one in which disease and drinking habits are prevalent, whose members are inadequately fed and clothed, and in which houses are crowded and

insanitary. It may broadly be said that an advance in material prosperity of the community as a whole will be reflected in a decreased incidence of tuberculosis.

It must not, however, be supposed that an improvement of material conditions would immediately result in the elimination of tuberculosis. Though the prevalence of tuberculosis is at the present time less among the well-to-do classes than among the poorer classes, the well-to-do classes are very far from being immune. Many other factors exist which have the effect of weakening the defensive forces of the body and of rendering it an easier prey to the invading bacilli. The Committee have already said in their Interim Report that constitution, habits, and methods of life, the nature of an individual's occupation, and the diseases and accidents to which he may have been subjected are all factors which cannot be neglected in considering the incidence of tuberculosis, and these factors need not necessarily be in any way connected with the poverty or wealth of the individual.

At the same time it remains true that any measures which result in a general improvement in the standard and condition of life are of the greatest importance in the prevention of tuberculosis.

How to effect this improvement is a question of difficulty and complexity that is exercising the minds of many people at the present time. To attempt to deal with it would be to step beyond this Committee's functions. They propose merely to touch briefly on one or two salient points which are intimately connected with the incidence of tuberculosis.

Housing.

19. The Committee believe that much may be done to assist in preventing tuberculosis by improvement of the housing conditions in this country. There is no doubt that dirty, ill-ventilated, dark, damp, and otherwise insanitary houses are provocative of the disease. There is equally no doubt that the incidence of the disease is greater where families are crowded into one or two dirty and ill-ventilated rooms than where better conditions are obtainable, or where the rooms are kept clean and ventilated. The air of an overcrowded room rapidly becomes, and usually remains, foul, lowering the vitality of the occupants. Light, fresh air (or at least movement of air), and space are the conditions which it is most desirable to obtain. The Committee are aware that light and fresh air are more difficult to obtain in cities, and that, even where fresh air is obtainable, the poorer classes are often driven to keeping their rooms stuffy and ill-ventilated owing to the expense of providing sufficient clothing and artificial heat to maintain adequate warmth. The Committee fully realise the difficulties surrounding the housing question, but they consider improvement in the present state of affairs both desirable and possible, and that even amongst the poorest an increased appreciation of the importance of cleanliness and ventilation, &c., would tend to decrease the ravages of the disease. The Committee hope that much improvement may be effected by means of schemes for town planning and garden cities. The Committee also note with satisfaction that a Royal Commission on Housing in Scotland has been appointed, and they have no doubt that the Commission will keep constantly in view the intimate relation between housing and disease.

Social and Economic Causes of Tuberculosis.

20. There is great need for research work in connexion with the social and economic causes of tuberculosis. The present knowledge on the subject, though increasing rapidly, is inadequate, and it is highly desirable that more information should be obtained, and that the information, when obtained, should be sifted and coördinated so as to serve as a reliable basis for the preparation of remedial measures. Inquiries should be made into the causes which operate so as to give rise to the existing occupational incidence of tuberculosis, and into local and other factors which have a bearing on the problem of the distribution of the disease. In another part of this report the Committee have indicated the lines upon which a scheme for research work might be instituted, and provision is made to facilitate the making of such inquiries.

BOVINE TUBERCULOSIS, THE MILK-SUPPLY, AND TUBERCULOSIS AMONG CHILDREN.

The Committee are of opinion that the bacillus of bovine tuberculosis is a cause of tuberculosis in man, and, to a greater extent, in children, and that the best way to attain complete security from the danger of bovine infection is entirely to eradicate tuberculosis from the cattle of this country. They think that this is not impossible of achievement, but is likely to be a slow process, and must depend upon coördinated and continuous effort. No single or purely local effort will suffice to eliminate such tuberculosis. The Committee consequently welcome the proposed legislation dealing with the question of milk-supply, which, they consider, should be upon the widest possible basis and should include the whole country. They are of opinion that county and county borough councils should have power to inspect herds, dairies, and farm buildings, to administer all enactments relating thereto, and to require that certain cows should be slaughtered, both in the interest of the public and of the dairy industry.

The Committee recognise the importance of early diagnosis of tuberculosis in children before pronounced symptoms have developed, and they consider that there is urgent need for a wide application of the principle of open-air treatment and education by means of open-air schools. They consider that a sum of £200,000 is required for the provision of institutions for children, and recommend that if the money made available by the Finance Act of 1911 is insufficient to provide this sum, additional funds should be provided by Parliament.

Under the heading of Research the following highly important recommendations are then made:—

RESEARCH.

37. In the Interim Report the Committee laid down the principle that any scheme which should form the basis of an attempt to deal with the problem of tuberculosis should provide (*inter alia*) that concurrently with measures for prevention, detection, and treatment, provision should be made for increasing the existing knowledge of the disease and of the methods for its prevention, detection, and treatment by way of research.

Existing knowledge of tuberculosis, though sufficiently advanced to justify the expenditure of large sums of money in order to provide treatment and to prevent the spread of the disease, is far from complete, and further discoveries of an important character may be anticipated. The Committee consider, therefore, that further research work should be undertaken on subjects affecting the prevention of tuberculosis, its diagnosis and efficient treatment. This was realised by the Committee when they laid stress in the Interim Report on the importance of research.

The Committee have been at pains to obtain the view of experts on this question, and they desire to express their indebtedness to those who have done so much to assist them in coming to their conclusions.

38. By Sec. 16 (2) of the National Insurance Act the sum of one penny per insured person payable out of moneys provided by Parliament may be retained by the Insurance Commissioners, in whole or in part, to be applied in accordance with Regulations made by them for the purpose of research.

According to the latest available returns this sum should amount at present to about £57,000 per annum. It will probably show a small increase in future years in proportion to the natural increase in the number of insured persons. This provision marks a most important development in the attitude of the State towards scientific research into the causes, treatment, and prevention of disease. Hitherto, apart from a small annual sum expended by the Local Government Board and occasional grants for particular objects, the State has, in the main, left research to voluntary agencies. The Committee welcome the fact that by the National Insurance Act a considerable sum of money is now permanently available for the purpose of research.

At the same time the Committee wish to express their high appreciation of the valuable work which has been rendered possible by voluntary effort in the past, and their opinion that research under the National Insurance Act should be organised in such a way as not to discourage either voluntary contributions or voluntary research towards the same ends. The aim should rather be to stimulate and coöperate with voluntary agencies.

The Committee are of opinion that the whole of the moneys made available by the National Insurance Act could usefully be spent on research in connexion with tuberculosis. They understand, however, that the Insurance Commissioners have been advised that the moneys in question may properly be applied to research in connexion with any disease which may affect insured persons. The Committee anticipate that for the present, at any rate, the moneys will be applied mainly to research in connexion with tuberculosis and its allied problems, but, in view of the possibility of extension of research to other diseases, they consider that any scheme for dealing with these moneys, and any machinery which may be established for that purpose, should, as far as possible, be on lines which will be applicable to and facilitate such an extension.

While primarily considering the question in relation to research in connexion with tuberculosis, the Committee have kept this object in view in making their proposals for dealing with the money.

General.

39. Before proceeding to a detailed consideration of the scheme which they wish to propose, the Committee desire to make certain observations of a general character.

The inquiries which should be carried out must necessarily cover a wide field, and should include inquiries (amongst others) of a clinical, pathological, experimental, statistical, and sociological character.

A more rapid advance in our knowledge and better and more practical results are likely to be obtained if a comprehensive scheme of research is carried out on a definitely and carefully organised plan, and if all inquiries of whatever nature are, as far as possible, correlated and coördinated.

In order to avoid unnecessary overlapping, the results of all research work, whether apparently barren or fruitful, should be collected by one body and published periodically. Hitherto work which has at the time appeared to lead only to a negative result has seldom been published. It is of importance that a change should be made in this respect, firstly, because its publication may prevent other workers from spending unnecessary time and money on precisely the same work: and, secondly, because it is impossible to say whether work which appears to be barren at the moment may not afterwards, in light of increased knowledge, prove to be of considerable value.

It is also desirable that arrangements should be made whereby workers in this country should be kept in touch with the results of research work in other countries.

Every sanatorium, dispensary, and other institution for the treatment of tuberculosis and other diseases should have access to laboratory facilities for carrying out routine work and for the collection of data.

Many of these institutions should have complete laboratories of their own.

At the same time problems will arise in these institutions which the medical practitioners connected with them may not have the means or time to investigate, and which they should be able to refer to a central body.

The boundaries between the different parts of the United Kingdom which it may be necessary or desirable to observe for political or administrative reasons are not necessarily applicable to a scheme for scientific investigation. The work of research should be carried on in places having the best facilities for the particular investigation contemplated without being limited by consideration of geographical situation, provided that every part of the United Kingdom has the advantage of close association with the work of scientific investigators.

Central organisation and direction mean economy of time and money.

These and other considerations of a similar nature have led the Committee to make the proposals for administration which are more particularly described in the next succeeding section of this report

Administration.

40. The Committee are of opinion that a Minister or a Government department could not make the best possible use of this money without having the advantage of the advice of a number of different persons and obtaining the assistance of experts in the carrying out of the work.

For these reasons the Committee recommend the establishment of an Advisory Council and an Executive Committee.

The Advisory Council should include representatives from different parts of the United Kingdom, of the various Government departments concerned, of medical, scientific, and teaching bodies interested in the question of research, together with scientific persons of distinction, and men of business capacity and proved ability with, in most cases, experience of public work. The representatives of Government departments should be in a minority and should be members *ex officio*.

It will probably be necessary for the Advisory Council to consist of not fewer than 25 members, and preferably not more than 30 members.

The Executive Committee should consist of not fewer than five nor more than ten members. The majority, but not all of these members, should be experts.

The members of both these bodies should be appointed by the Government. It is advisable that the Advisory Council should be afforded the opportunity of making representations to the Government as to appointments to the Executive Committee.

41. It is important from time to time to change the *personnel* of these bodies, while preserving a certain measure of continuity.

The Committee recommend, therefore, that the members other than those representing Government departments should not be appointed for more than five years, but should be eligible for reappointment. A system of retiring by rotation should be adopted, and after the first few years retiring members should not be eligible for reappointment, save in exceptional circumstances, until an interval of 12 months has elapsed.

The members of the Executive Committee should be remunerated for their services, and the members of both bodies should receive the usual travelling expenses and subsistence allowances.

42. It is obvious that the Executive Committee will need a permanent whole-time secretary in order to assist them in carrying out their duties. In view of the character and importance of these duties he should be an expert of high standing in research, possess administrative capacity, and be paid a salary of £1200 to £1500 per annum. If practicable, he should also act as secretary to the Advisory Council.

Duties of the Advisory Council and Executive Committee.

43. The duties of the Advisory Council should be to advise, make suggestions, and submit the Executive Committee's budget to the Government, and to advise, criticise, and make suggestions to the Executive Committee.

The duties of the Executive Committee should be to frame a budget which should be discussed and considered with the Advisory Council before being submitted by the Council to the Government; to determine, after consultation with the Advisory Council, the scheme of research work; to make periodic reports to be transmitted by the Advisory Council to the Government; and generally to organise and supervise the research work wherever carried on.

It is evident that when first organising the scheme both bodies will have to meet frequently, but that when the scheme is in operation there will be less demand on their time.

44. It is impossible to forecast accurately whether research work will produce positive or negative results, the exact length of time required to carry out a particular piece of work, the amount of money required to complete it, or what further work the results obtained may necessitate. Accordingly the Executive Committee will find it difficult to frame any hard and fast estimates of expenditure, or lay down with accuracy what sum of money will need to be spent in a given year. The balances unexpended in a given year should, therefore, be carried forward to the next.

Methods of Expending Money on Research.

45. The Committee have received evidence indicating the following (amongst other) ways in which the funds available for research might be expended: on a central bureau, on special institutes, in grants to approved institutions, in grants to individuals, in making special inquiries, and in scholarships and fellowships.

These methods of expending the funds are not mutually exclusive.

The Committee are of opinion that the work of research could advantageously be carried out on the following (amongst other) lines:—

(*a*) A central bureau should be established and should be the headquarters of the Advisory Council and Executive Committee. The central bureau should have a statistical and sociological department, in the work of which should be included the coördination and correlation of results. With regard to statistical investigations, every effort should be made to utilise, where possible, and coöperate with the statistical departments of the different Government departments. Statistics should be so collected and framed as to be comparable with the existing statistics of mortality.

There should also be a library and publishing department. The central bureau should be under the immediate control of the Executive Committee.

(*b*) Clinical, pathological, bacteriological, chemical, and other scientific researches should be carried out by competent investigators employed by the Executive Committee in institutions approved by them.

(*c*) When the Government, on the recommendation of the Executive Committee, and after consulting the Advisory Council, deem such arrangements desirable, researches of the same nature as those referred to in the preceding paragraph should be carried out in an institution or institutions (including laboratories and hospital wards) which should be under the immediate control of the Executive Committee to the extent and for the purpose in question.

(*d*) Money should be available in order that special inquiries—e.g., of a statistical and sociological nature—should be carried out by the Executive Committee if necessary, independently of any particular institution.

(*e*) The question whether a sum of money, not exceeding £1000 per annum, should be available as a prize or prizes for the best original research work done should be considered. The money should only be awarded if the discovery is of sufficient importance and utility.

Research Workers.

46. The Committee are of opinion that some workers of proved and exceptional ability should be enabled to devote their whole time to research work, and should be given a definite and adequate salary and be entitled to a pension.

Efforts should also be made to retain for research work young and talented investigators who would otherwise tend to drift into other lines.

Additional Laboratory Facilities.

47. In the opinion of the Committee the value to the community of the scheme of research recommended in this Report will not be fully secured unless it is accompanied by a general extension throughout the United Kingdom of clinical laboratories for the better diagnosis and treatment of the disease provided out of funds other than those available under Section 16 (2) of the National Insurance Act.

The Committee, in conclusion, welcome the issue by the Local Government Board of regulations making it compulsory to notify cases of tuberculosis of all kinds, but they regret that no power exists whereby tuberculosis can be made compulsorily notifiable in Ireland. They consider that additional facilities should be afforded to medical students and practitioners to acquire familiarity with the methods of diagnosis of tuberculosis.

THE REPORT OF THE MEDICAL OFFICER OF THE BOARD OF EDUCATION.

IN a general review of Sir George Newman's report for 1911, as medical officer of the Board of Education, we drew attention recently[1] to the salient features of a valuable document, but stated the intention to consider further certain sections of the report which should be specially brought to the notice of our readers.

Dental Disease.

Among the subjects in Sir George Newman's report there is none which is of greater importance to health than that of dental disease and dental treatment. Sir George Newman reminds us that the evil effects of such disease have been imperfectly recognised in the past, owing principally to the fact that such effects on the general health of the child, and subsequently upon that of the adult, are largely indirect in character. Now a different view is held, and he rightly urges that the pernicious effect of dental disease upon health, coupled with the fact that in its early manifestations it may be readily recognised and successfully treated, make it a matter of importance that it should be included among the conditions for which the local education authority should provide a remedy. Sir George Newman does not call upon this authority to do more than to take steps to ensure that a beginning at least is made in a definite scheme directed towards the prevention and cure of the disease. He is able to point to a table exhibiting the proportions of children found, as the result of medical inspection, to have sound teeth, somewhat defective teeth, and seriously defective teeth. These proportions are given as percentages both of entrants and leavers examined in 11 counties and 16 towns. The figures may easily give rise to a feeling of surprise in the mind of persons not familiar with the condition of children of the elementary school class in this respect. As might be expected, the percentages vary very widely, perhaps in some degree owing to differences in the standards applied, but the fact remains that they manifest an abundant prevalence of dental disease which urgently calls for treatment. Moreover, Sir George Newman tells us that the figures in this table are representative of those of other areas and also confirm returns of former years.

Interesting information included in Dr. James Wheatley's report for Shropshire is referred to by Sir George Newman. Dr. Wheatley shows the extreme prevalence of dental caries even in a country area. Children in country schools are somewhat better off in this respect than children in town schools, but Sir George Newman states that the difference is less than is usually supposed, for even of the country scholars aged 5 and 12 respectively, only from 7–8 and 3–4 per cent. have sound teeth. Moreover, among the children in the country schools the average number of decayed teeth among boys and girls aged 5 is 6·0 and 5·8 respectively, and among town boys and girls of the same age 7 and 6·5 respectively.

[1] THE LANCET, Jan. 25th, 1913, p. 266.

Observations by Dr. Wheatley on the connexion of *mouth breathing* and artificial feeding in infancy with dental caries is also referred to by Sir George Newman. The figures on this subject indicate excess of decayed teeth among children suffering from adenoids of a sufficiently marked degree to call for medical treatment, and also excess of decayed teeth among children artificially fed in infancy. Again, inquiry into the possibility of relationship between dental caries and eating sweetmeats supplied figures very suggestive of the influence of sweetmeats in inducing this condition.

Dental Treatment and Prophylaxis.

Sir George Newman insists upon three elementary principles in dealing with dental disease either by way of prevention or cure. First, that by far the most important factor in the production of dental caries in children is unsuitability in the character of the diet provided from infancy onwards. The immediate cause, he points out, is the accumulation about the teeth of fermentable carbohydrate material due to the form in which the carbohydrate food is taken, or to the absence of some detergent form of fibrous food partaken at the same time or subsequently, or to both these conditions operating together. Among other predisposing or contributory conditions are the influences of heredity, various forms of infantile disease, the condition of the gums, the degree of mastication, salivation, and uncleanliness, but for practical purposes it is mainly a question of diet. Sir George Newman points out that improvement in this matter can come about only through education and a change in the dietetic habits of the people. The next line of defence is the maintenance of the teeth and mouth in proper condition which can be secured in large degree by use of the tooth-brush, and the third line of defence is by arrest of dental caries at the onset, and this is an immediately practical step which should at once be taken in the areas of all local education authorities in some form or another. In connexion with the subject of cleanliness, it may be stated that in many reports reference is made to the use of the tooth-brush, and in several areas tooth-brush drill and tooth-brush clubs have been inaugurated.

The remainder of this section in Sir George Newman's report is devoted to the action taken by local education authorities in different localities. In the majority of these localities there is a dental clinic which one or more part-time dental surgeons attend. In some a small charge is made to the parents when their incomes exceed a specified amount, such as 24*s.* a week. It appears that altogether provision for dental treatment is made in some 29 areas, and that in one of the 29, London, dental treatment is provided in seven centres.

Educational Provision for Defective Children.

A separate section in his report is devoted by Sir George Newman to an acount of the provision which has been made under the Elementary Education (Blind and Deaf Children) Act, 1893, and the Elementary Education (Defective and Epileptic Children) Act, 1899. There was an increase of seven of these schools in the code year ending July 31st, 1912, bringing the total to 335 schools. Sir George Newman says that the result of medical inspection has been to bring to light a number of children temporarily or permanently defective for whom education in the ordinary public elementary school is unprofitable, and for whom special educational provision is necessary. Before 1908 the discovery of such children was left to lay officers and teachers at whose initiative they were brought before a medical officer only in those areas where special educational provision was made. There was therefore no official record of abnormal children in many areas, and even in the most enlightened only marked cases falling into well-defined groups of blind, deaf and dumb, feeble-minded, crippled, and epileptic were discovered, and special education did not extend, generally speaking, beyond the scope of these groups. Medical inspection has led to the discovery of an increased number of children belonging to the groups already receiving special school education, and in addition large numbers of new and formerly unrecognised cases have been brought to light for whom no special educational arrangements previously existed. Sir George Newman supplies a complete list of types revealed in the course of medical inspection—viz., three for the blind, three for the deaf, six for the physically defective, and two for epileptics. There are also the mentally defective and incurable children which he does not subdivide. He adds that it may be anticipated that further groups or classes will be differentiated with the progress of medical inspection and a fuller opportunity for detailed attention to diagnosis. The extension of special educational treatment since 1908, of which Sir George Newman tells us, marks the results of more complete knowledge of the need for special education of defective children. Since that year new provision has been made for the partially deaf, the "hard of hearing," backward, delicate, and tuberculous children, and children suffering from ophthalmia. Again, the establishment of open-air schools, playground classes, and open-air class-rooms are all new features in the educational scheme, and ringworm has also come to be regarded as a diseased condition for which special education is required.

Under the heading "Educational Classification" Sir George Newman says that local education authorities may desire, generally speaking, to make provision under the two Acts we have mentioned above, but that "much of the influence of the universal establishment of a school medical service has been to encourage the view that measures in regard to afflicted children need no longer be confined to those who fall within the four corners of these Acts." He notes that "authorities are beginning to recognise an obligation to the whole class of abnormal pupils of all ages, and to understand that while a certain proportion require special school training there are many for whom adaptations of arrangements which obtain in the ordinary public elementary schools will suffice. Again, there are many pupils over the age of 16 for whom further training in the shape of technical and evening work is essential if they are eventually to attain success in an industrial career."

Abnormal Children and the Duties of the School Medical Officer.

Sir George Newman discusses the duty of the school medical officer in regard to abnormal children. In the first instance, come the "search for the child," the need for full and careful diagnosis, and the ability to advise as to the appropriate educational treatment. The cases which are beyond doubt can be referred at once to their proper special school, but many others can only be dealt with provisionally. "The important point to bear in mind is that, except for schools receiving clearly defined and fixed types—e.g., the blind, deaf and dumb, epileptic, and definitely feeble-minded—the special school must be considered in some degree as a special school of observation, subject to frequent medical inspection with a view of re-classification and transference of children to the position in the educational scheme best suited to them." Indeed, Sir George Newman thinks that authorities may have to consider in the future the establishment of schools of observation during the period of uncertain diagnosis. In this work the school medical officer will obviously play a prominent part. In the special school or class the school medical officer would become responsible, directly or indirectly, for any special medical treatment which the authority or managers might find it necessary to undertake, and in the case of residential institutions this would extend to ordinary medical attendance for the treatment of incidental disease. The duties, therefore, which would fall to the school medical officer in relation to abnormal children would be (*a*) selection; (*b*) medical diagnosis; (*c*) educational equipment; and (*d*) medical treatment.

Schools for the Blind, the Deaf, and the Epileptic.

In subsequent paragraphs Sir George Newman gives an interesting account of schools for the blind, the deaf, and for epileptic children. Under "the causes of deafness" he states that subsequent figures confirm those he gave in his report for 1910, in which he stated that among the deaf-mutes in the special schools 61 per cent. were congenitally deaf. He also refers to the question of the proportion of deaf children who have been educated in the oral method, and who in after life make use of speech. This, he says, was investigated by the London County Council, who found that among the totally deaf pupils, 228 in number, attending evening classes, 112, or 50 per cent., made no use of speech after leaving school, and of the remaining 116, 49, or 22 per cent. of the whole, use speech with the deaf. In connexion with schools for epileptic children, he comments upon the advantages derived at Lingfield from the extended gardening operations which are there undertaken by the children, and he says that the mental

and physical improvement in the children is largely due to the new provisions for open-air school life. At Chalfont a similar beginning has been made in the present year. He adds: "Such returns as are available render it fairly certain that for cases of severe and frequent epilepsy, whatever be their mental condition, now admitted to certified schools, there is only one end in the large majority of cases—namely, colony life."

The Education of the Feeble-minded.

In his discussion of the education of feeble-minded children, Sir George Newman insists upon the fact that much may be done by training and equipment, particularly in youth, to render the individual capable, in greater or less degree, of maintaining himself, wholly or partly, with or without institutional care and supervision. The duties which fall to the school medical officer are, he says, the necessity of determining the number of school children in each area who are mentally abnormal; the diagnosis, differentiation, and classification of such children; and the duty of advising and supervising the character of their education. The coöperation of the school teacher is necessary, and teachers should be warned to look out for children who are mentally peculiar or unduly backward, and submit them for medical examination. Sir George Newman classifies children in five groups—the mentally normal, the dull or backward child, the feeble-minded child, the imbecile child, and the idiot child. A number of school medical officers have stated the percentages of children of various grades of mental defect in their areas, with the result that different reports gave percentages of dull and backward children ranging from 0·5 to 12·0, and of feeble-minded children from 0·05 to 0·57. Such figures as are available, Sir George Newman tells us, would point to the number of 27,000 as the probable number of feeble-minded children in the country, of whom one-fifth to one-seventh are low grade and ineducable, leaving some 24,000 for whom special school provision is necessary. For 12,000 of this number some provision already exists. Concerning the degree of feeble-mindedness, Sir George Newman refers to a special report by Mr. H. Emlyn Jones relating to 387 children in Essex, of whom he found that 45 were so defective that they were not likely to derive benefit from instruction of any kind, 22 required training in a residential school, 256 were suitable for special day classes, and 44 needed special treatment for a short period. The remaining 22 children were too old for special education.

Sir George Newman states that a considerable number of authorities have adopted a standard scheme of examination of mentally deficient children which appeared first in his report for the year 1909 and which is reprinted in his present report. The adoption of this course would assure that no important point in the condition of the child examined is overlooked, and in the future the information which can be derived from a number of cases thus recorded should be exceedingly useful. He refers also to the psychological and educational tests associated with the name of Binet. He strongly recommends the use of them by school medical officers as part of their examination of mentally deficient children.

Scheme for Dealing with the Mentally Abnormal.

In connexion with the educational provision for mentally abnormal children, Sir George Newman says that day special schools or classes are required (*a*) for dull and backward children and for some doubtful cases requiring observation; and (*b*) for children who are definitely ascertained to be feeble-minded, including severe cases admitted on probation to determine whether or not they are educable. Suitably graded classes and residential schools are also required to meet the necessities of cases likely to require continuous care, and also in thinly inhabited districts for feeble-minded children if the number of children who can be gathered together in one place is not sufficient to warrant the establishment of a special day school. Associated with these special schools there should be provision for colonies and for industrial training. In all cases there should be systematic after-care and supervision. Sir George Newman then lays down a comprehensive scheme in a definite system arranged to meet the requirements of individual children in all grades of mental abnormality. In subsequent pages he gives an account of the amount of provision which has been made for children of this class, and points out the advantages of care committees following up the children after they have left school in order that a sound opinion may be formed of the value of the training. He then proceeds to give the results of observations in this matter by the care committees of London, Liverpool, and Birmingham—the London figures relating to 253 children, indicating that 109 were found to be employed, 25 unemployed, and 119 were lost sight of. In conclusion of this section of his report Sir George Newman discusses what is needed, which, stated briefly, may be said to be more accurate and useful classification, more practical manual and industrial training, including general physical and mental education, more effective and vigilant after-care, and power to establish and assist residential institutions or colonies, which should include a comprehensive set of workshops and land provision for horticulture, gardening, physical exercise, and open-air schools.

Open-air Education.

The next section in Sir George Newman's report, which is on open-air education, gives a useful account of the steps which may be, and are in fact being, taken to provide that children requiring it are educated under open-air conditions. Thus the character of the buildings on the open-air system and the holding of classes in playgrounds are described. An account is also given of a "residential open-air school of recovery" instituted at Halifax, in which fresh air, sufficient plain food, cleanliness, and the treatment of the maladies from which the children are recovering are the essential features. Sir George Newman speaks of this as a "much needed type of institution," and undoubtedly it must supply a want which has often been experienced. Following this section is another on sanatorium schools and schools of recovery. Here, again, we note the building is to be adapted to the special conditions of the children, and a useful summary of the points to be observed in its design is carefully stated in the report.

"*Mothercraft.*"

The extreme importance of fitting the children for the performance of the duties which will devolve upon them later in life is fully recognised by the Board of Education, and is the subject of a useful section on "mothercraft," which discusses the instruction to mothers in infant and child welfare and instruction to girls in the same subject. Sir George Newman tells us that the Board of Education are prepared, under their Regulations for Technical Schools, to recognise and give grants in aid to classes in hygiene, cookery, sewing, &c., held in connexion with schools for mothers, and concerning the instruction to girls he points out that this may be given to the elder girls in public elementary schools and to girls who have already left school by means of continuation classes. He attaches importance to a mother learning to recognise signs of health, and being impressed with the fact that small deviations in health from the normal must be attended to. He would thus see the scope of schools for mothers extended, so that if these institutions were able to continue their watchful care of the children until school is commenced and the responsibility of the school medical officer begins, some children at least would be provided for. He indicates the nature of the supervision they might exercise, but says that at the present time, it seems, no official recognition or financial aid can be given except in respect of definite classes of instruction referred to in the report, and, in the absence of sufficient funds, these institutions can be hardly expected to assume additional duties of this nature.

Medical Inspection and Juvenile Employment.

In a section on medical inspection and juvenile employment Sir George Newman gives an account of the various Acts of Parliament which relate to the employment of children. The Act of 1903 gives powers to local authorities to make by-laws regulating the employment of children as regards age, hours of employment, and specified occupation, including street trading, by persons under 16. The Labour Exchanges Act, 1909, gives to the Board of Trade power to establish and maintain labour exchanges, and there are now 400 exchanges, and almost all of them have juvenile departments at which some 10,000 boys and girls are registered per week. The Education (Choice of Employment) Act of 1910 empowers local education authorities to make arrangements for giving to boys and girls under 17 years of age assistance with respect to

the choice of suitable employment by means of the collection and communication of information and the furnishing of advice. Under the last two Acts juvenile employment committees have been formed locally, and it appears that the school medical service may be brought into relation with the statutory machinery in the following immediately practicable ways:—(*a*) the appropriate and effective coördination can be arranged between the school medical service of each area and the juvenile employment committee of that area, and (*b*) such arrangements on the part of the school medical service can be made as will ensure more adequate provision for dealing with children employed, or about to be employed, the services of the school medical officer being requisitioned. Thus the school medical officer can ensure the adequate medical inspection of leavers. He can undertake the medical inspection of all employed school children. A register should be kept of all children in employment out of school hours or partially exempted from school attendance, and these children should be periodically examined by him as "specials"; moreover, in several educational areas medical inspection has been introduced for children above the age of 14 years attending secondary schools, trade schools, &c., and this course might be generally adopted. With regard to the children rejected for factory work or passed with qualifying conditions, arrangements have been made in certain towns for the certifying factory surgeons to supply confidential information as to the children and young persons rejected on medical grounds, with a view to the juvenile employment committees endeavouring to secure them suitable employment and advising the parents as to medical treatment. With regard to school children under 14 years of age who have broken down or otherwise been found physically unfit for employment it may be practicable for the local educational authority, through their school medical officer and school nurse, or through the juvenile employment committee, to render assistance and supervision. Coördination between the work of the school medical officer and certifying factory surgeon is necessary when these posts are held by separate officers. In some areas the school medical officers are being appointed members of the juvenile employment committees, but in others there has been unwillingness of the authority or of the school medical officers to render assistance. Dewsbury is cited as an example of a town where the school medical officer is also the certifying factory surgeon and the coördination is especially complete.

The Provision of Meals.

In the section on the provision of meals Sir George Newman includes figures which show that year by year more children are fed and more meals given, the London figures showing for 1910–11 41,672 children fed and 203,461 meals given. He discusses the need for coördination of this branch of administration with the school medical service. In addition to the school medical officer taking part in selection of cases of malnutrition, Sir George Newman urges that the end to be aimed at is that all children admitted to the meals should be medically examined by him either before or as soon as possible after admission. Obviously the teachers are likely to observe the underfed appearance of the children, their listlessness during school hours, or the poverty of their parents may be known to them, and it will be for the school medical officer and his staff to ascertain by individual attention which of these children are being prejudiced in their education by lack of food. He includes among the other duties of the school medical officer "the determination of the dietary of the children generally, and of individual children whose health or age renders it desirable that special arrangements should be made in their case, the supervision of the arrangements for the cooking and distribution of the food, and the inspection of the quality and quantity of the food." He thus links up the work of the school medical officer with the provision of meals.

No one can read Sir George Newman's report without recognising the influence which the medical administration of the Board of Education and the local education authorities must be having on the health of the children of this country and without being impressed with the wide view Sir George Newman takes of the ability of the medical service to take part in, and in large degree to leaven, the various branches of educational administration, so as to ensure that they shall be productive of the greatest amount of good to the community. The advice he gives must impress local authorities with its soundness and with the need of following it in all matters which are subject to their jurisdiction.

THE BAGHDAD MEDICAL MISSION.

MISSIONS to the heathen, or some of the methods of missionaries, have not always commended themselves to every section of the public in this country. Medical missions, however, to the best of our belief, have no opponents; nor is there any lukewarmness about them among their friends. The reasons for this difference are not quite clear; let its existence be accepted uncritically as a genuine compliment to those members of the medical profession who devote themselves to such tasks. In Uganda, not improbably, the brothers Cook will be held in honourable remembrance when the fame of Hannington, and even of Tucker, has faded into oblivion. The Cooks, happily, are still carrying on the magnificent work they began many years ago; but medical missionaries frequently have to take their lives in their hands, and it scarcely needed the deaths of Pennell and Gibb last year or of Pain in February last to bring home to us the dangers of their calling. It therefore behoves those societies and churches which equip medical missions to be particularly solicitous as to the conditions in which the *personnel* have to work and live, and to provide for the latter as near an approach as circumstances will allow to European standards of hygiene and sanitation. Indeed, proper housing and accommodation for the staff is even more important than for the patients, though both should be provided by any authority which feels it incumbent on itself to send out a medical mission at all.

Increasing Success of the Mission.

An illustration of this principle can be found much nearer home than Bannu or Peking. At Baghdad, the city of the Caliphs, the Church Missionary Society has maintained since 1886 a most successful medical mission, at present in charge of Mr. Frederick Johnson, M.B. Lond., F.R.C.S. Eng., and his assistants, Mr. G. W. Stanley and Miss Hill, and a staff of nurses. The mission has firmly established its reputation among the inhabitants of Baghdad, and also among the Arabs of the semi-desert round about. Patients are frequently brought 10, 20, and even 30 days' journey to the hospital, and the applicants for relief increase yearly in numbers. Hitherto the work has been done in some hired houses as innocent of sanitation as most others in the squalid streets of this densely crowded Eastern city. In these buildings 449 major and 184 minor operations were performed in 1911, but it goes without saying that the difficulties of the medical staff are enormously increased by the conditions in which they have to work. Nor is this all. Sir William Willcocks's great schemes of irrigation will ultimately increase the population of Baghdad, and, even more, of the adjacent districts; and the Baghdad railway is another result of European enterprise which will inevitably react in much the same way. A large measure of prosperity will assuredly accrue to these poverty-stricken regions, and Sir William Willcocks expresses the opinion that a hospital in working order before the railway reaches Haroun-el-Raschid's capital will be very nearly self-supporting.

Some Examples of the Surgical Work carried on.

Such a hospital will not want for clinical material. Whatever knowledge the native physicians in various parts of the East possess of simples and herbs, they seldom pretend to much surgical skill, and a firm belief in Western surgery is usually one of the first results of the establishment of any medical mission. Baghdad and district make no exception to this rule, and the mere fact that Mr. Johnson does 450 major operations a year with only 18 beds all told shows what a field for surgery he is working in. Stone in the bladder is an especially common complaint among his patients, and as this has often been endured for several years before relief has been sought, some of his specimens reach dimensions such as no surgeon in England can

parallel. Fig. 1 shows the broken fragments of one such enormous vesical calculus, which were removed through a perineal cystotomy wound after lithotrity by Neve's pattern of Harrison's stone-crusher. As the photograph indicates, the total weight of the fragments was 18 oz., and the size of the pile can be estimated by the scale of inches shown.

FIG. 1.

Crushed fragments of an immense vesical calculus.

This enormous stone challenges comparison with, even if it does not actually surpass, the monster which is preserved in the Pathological Museum at Cambridge. The latter was discovered in a woman's bladder at a post-mortem examination in the seventeenth century, and was presented to the reigning Stuart king as a token of the loyalty and affection of the University; after his death it found its way back to Cambridge.

Another photograph (Fig. 2), placed at our disposal, like the

FIG. 2.

Malformation of the hand in an Arab child.

first one, by the courtesy of Mr. Johnson, shows a fearsome congenital deformity of the hand. In this case it proved to be impossible to save more than the thumb and little finger; the whole of the enormous deformed mass which represents the three middle digits had to be sacrificed. Bilharzia infections provide the Baghdad Mission with another frequent source of therapeutic problems. There can, indeed, be little doubt that so far the limited resources at Mr. Johnson's disposal have only sufficed for touching the fringe of the surgical work that is waiting to be done.

Scheme for Removal of the Hospital; an Appeal for Funds.

The Church Missionary Society, it is gratifying to know, is rising to the responsibility. A scheme has been decided upon for removing the work of the mission from its extemporised quarters in an insanitary slum to a suitable site on the Tigris, and plans have been drawn for an up-to-date hospital of 50 beds (as against 18 at present), together with residence for the medical and nursing staffs. Towards the sum of £6500, which is at least necessary for this admirable scheme, about £3000 are already in hand. The approval of the Turkish Government for the erection of the buildings has been obtained, and only the financial difficulty remains to be overcome. We cannot believe that this obstacle will long prove insurmountable. As far as it lies in our power to help we are glad of the privilege of doing so, and of adding our voice to the appeal now issued by the Church Missionary Society for the funds to enable the matter to be taken in hand. Any member of the profession who has patients of charitable and generous instincts would do well to lay before them the claims of the Baghdad Medical Mission, and the name of the Rev. H. G. Harding, to whom contributions should be sent, at the Church Missionary House, Salisbury-square, London, E.C.

MEDICINE AND THE LAW.

An Audacious Impostor.

AT the Old Bailey recently Harry Virtue, otherwise Richard Henry Barber, pleaded guilty to indictments charging him with giving certificates of the cause of death in which he had falsely described himself as R. H. Barber and as being possessed of the qualification of a Licentiate of the Royal College of Physicians. He was sentenced to nine months' imprisonment in the second division, and thus, for a time at all events, is closed the career of a most impudent impostor, who for some years has fraudulently pretended to be a qualified medical practitioner, endangering the lives of patients, and probably, in the case of some at least of those for whom he gave bogus certificates, permitting, if not accelerating, their deaths. His story, to which full publicity has now been given, is worth recapitulating briefly. Harry Virtue was born about 1865 at Openshaw, Manchester. As a lad he had several occupations, including those of a grocer's assistant and a butcher. At the age of 17 he went to the United States, and returning afterwards to England served for a few months in the Horse Artillery. Under what circumstances he left the army has not been stated, but in answer to an advertisement he obtained the post of assistant to a veterinary surgeon, which he held until 1904, when he left without notice. At this time he assumed the name of Alexander Marshall, a gentleman registered under the Veterinary Surgeons Act. He afterwards practised veterinary surgery on his own account, and probably went again to America in 1905 or 1906. It so happened that Mr. Richard Henry Barber, who was of about the same age as Virtue, and had qualified as a medical man in England, had practised in the State of Oregon, and had been accidentally drowned there in 1904. Virtue seems to have heard of this, for in 1906 a request was received by the General Medical Council that Mr. Barber's address should be changed in the Register from Portland, Oregon, to Liverpool, and since that date several other changes were made in it, during which time Virtue practised medicine and surgery as Dr. R. H. Barber, signing during a brief period at Treeton nine medical certificates, and at various times occupying posts as locum-tenent. However, a medical man with whom he was brought in contact seems to have suspected his lack of medical training and to have communicated with Dr. A. G. Bateman, the energetic secretary of the Medical Defence Union, with the result that inquiries were made and were followed by a hurried retreat on the part of Virtue from Treeton. Further investigation was followed by the issue of a warrant for his arrest, which was executed when he was discovered negotiating for the post of ship's surgeon on board a liner under the assumed name of "Dr. Thompson." When in custody and on the way from Liverpool to London in charge of the police, the prisoner made his escape by throwing himself from the moving train, an act which came very near

to putting an end finally to his malpractices and to involving the death of a plucky police officer. He was, however, recaptured, and after a period of two months, during which he feigned insanity in police courts and in Banstead Asylum, was at length committed for trial, with the result recorded. It is fair to state on the authority of Virtue's counsel that he seems to have given satisfaction to a number of patients, some of whom supplied him with testimonials to his skill, that he was several times re-engaged as locum-tenent, and that the court was also informed before sentence was passed that he had studied medicine in the United States, and taken degrees at Chicago, at Boston, and in Peru. In the circumstances it is to be regretted that he did not remain to practise in one of these localities, instead of returning to his native country. The case is one which should be instructive to medical men engaging locum-tenents, showing as it does the necessity for the most careful examination possible of all credentials wherever these are relied upon. The assumption by an impostor of the name and identity of a medical man on the Register has been tried before with varying degrees of success, but probably not often under the same conditions. Cases exactly similar are naturally likely to be rare, demanding as they do the death of a medical practitioner abroad or in such circumstances that his name remains upon the register, combined with knowledge of its occurrence being conveyed to someone willing to profit by it in the manner described. When the necessary coincidence occurs discovery may be long delayed, but is likely to ensue eventually either through someone who knew the deceased practitioner meeting his impersonator or simply through the suspicions of medical practitioners in the impostor's neighbourhood. In either event, to bring about exposure is a duty owed to the public and to the medical profession, and the gentleman who set inquiry on foot in the case of Virtue is to be congratulated upon having performed it with success.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 96 English and Welsh towns with populations exceeding 50,000 persons at the last Census, and whose aggregate population at the middle of this year is estimated at 17,852,764 persons, 8444 births and 5350 deaths were registered during the week ended Saturday, March 8th. The annual rate of mortality in these towns, which had increased from 17·2 to 18·0 per 1000 in the four preceding weeks, declined to 17·4 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these towns averaged 16·9, against a corresponding rate of 17·5 per 1000 in London during the same period. The death-rates last week in the several towns ranged from 6·6 in Southend-on-Sea, 6·7 in Willesden, 8·1 in East Ham, 8·7 in Enfield, and 10·5 in Reading, to 25·6 in Preston, 27·0 in Wigan, 28·3 in Dudley, 28·7 in West Bromwich, and 30·9 in Stockton-on-Tees.

The 5950 deaths from all causes were 228 below the number recorded in the previous week, and included 439 which were referred to the principal epidemic diseases, against numbers rising from 430 to 506 in the five preceding weeks. Of these 439 deaths, 206 resulted from measles, 81 from infantile diarrhœal diseases, 68 from whooping-cough, 54 from diphtheria, 18 from scarlet fever, and 12 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·3, against 1·4 and 1·5 per 1000 in the two preceding weeks. The deaths attributed to measles, which had steadily increased from 200 to 263 in the four preceding weeks, declined to 206 last week, and caused the highest annual death-rates of 4·7 in St. Helens, 5·2 in Wigan, and 10·6 in West Bromwich. The deaths of infants (under 2 years of age) referred to diarrhœa and enteritis, which had been 79, 81, and 76 in the three preceding weeks, rose to 81 last week, and included 25 in London, 7 in Birmingham, 7 in Manchester, 4 in Salford, and 3 in Stoke-on-Trent. The fatal cases of whooping-cough, which had been 70, 78, and 78 in the three preceding weeks, fell to 68 last week; 25 deaths occurred in London, 4 in Stoke-on-Trent, 4 in Liverpool, 3 in Portsmouth, and 3 in Leeds. The deaths attributed to diphtheria, which had been 53, 51, and 52 in the three preceding weeks, were 54 last week; 9 deaths were registered in London, 6 in Manchester, 5 in Birmingham, 3 in Leicester, and 3 in Salford. The deaths referred to scarlet fever, which had been 23, 19, and 29 in the three preceding weeks, declined to 18 last week, and included 3 in Birmingham, 2 in Sheffield, and 2 in Newport (Mon.). The fatal cases of enteric fever, which had declined from 18 to 8 in the four preceding weeks, rose to 12 last week, of which number 2 were registered in Stoke-on-Trent.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had steadily declined from 2112 to 1659 in the ten preceding weeks, had further fallen to 1617 on Saturday last; 160 new cases were admitted during the week, against 196, 180, and 183 in the three preceding weeks. These hospitals also contained on Saturday last 930 cases of diphtheria, 896 of measles, 303 of whooping-cough, and 45 of enteric fever, but not one of small-pox. The 1584 deaths from all causes in London were 49 fewer than the number in the previous week, and were equal to an annual death-rate of 18·3 per 1000. The deaths referred to diseases of the respiratory organs, which had been 443, 387, and 453 in the three preceding weeks, declined to 403 last week, but were no fewer than 244 above the number recorded in the corresponding week of last year. 40 deaths were attributed to influenza, against 24, 36, and 25 in the three preceding weeks.

Of the 5950 deaths from all causes in the 96 towns last week, 188 resulted from different forms of violence and 460 were the subject of coroners' inquests. The causes of 41, or 0·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Manchester, Leeds, Bristol, West Ham, Bradford, Hull, Nottingham, and in 70 other smaller towns. The 41 uncertified causes of death last week included 8 in Birmingham, 6 in Liverpool, 6 in Gateshead, and 2 each in London, Stoke-on-Trent, West Bromwich, Preston, and South Shields.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns, with an aggregate population estimated at 2,260,200 persons at the middle of this year, 1108 births and 862 deaths were registered during the week ended Saturday, March 8th. The annual rate of mortality in these towns, which had been 20·4, 18·7, and 20·7 per 1000 in the three preceding weeks, declined to 19·9 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 19·4, against 16·9 per 1000 in the 96 large English towns during the same period. Among the several towns the death-rates last week ranged from 11·7 in Falkirk, 14·0 in Paisley and in Motherwell, and 16·3 in Perth, to 21·8 in Glasgow and in Aberdeen, and 22·1 in Leith and in Greenock.

The 862 deaths from all causes were 33 fewer than the number in the previous week, and included 85 which were referred to the principal epidemic diseases, against numbers rising from 65 to 80 in the three preceding weeks. Of these 85 deaths, 49 resulted from whooping-cough, 15 from infantile diarrhœal diseases, 12 from diphtheria, 4 from scarlet fever, 3 from measles, and 2 from enteric fever, but not one from small-pox. These 85 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·0, against 1·3 per 1000 in the 96 large English towns. The deaths attributed to whooping-cough, which had steadily risen from 39 to 55 in the three preceding weeks, declined to 49 last week, and included 30 in Glasgow, 6 in Edinburgh, 3 in Motherwell, and 2 each in Aberdeen, Leith, and Greenock. The deaths of infants (under 2 years of age) referred to diarrhœa and enteritis, which had declined from 14 to 7 in the three preceding weeks, rose to 15 last week, and comprised 8 in Glasgow, 3 in Edinburgh, 3 in Dundee, and 1 in Clydebank. The fatal cases of diphtheria, which had declined from 12 to 5 in the four preceding weeks, rose to 12 last week; 7 deaths were registered in Glasgow and 3 in Aberdeen. The 4 deaths attributed to scarlet fever were equal to the number recorded in the previous week. The deaths referred to measles, which had been 7 in each of the two preceding weeks, fell to 3 last week, all of which

occurred in Glasgow. The 2 fatal cases of enteric fever were registered in Glasgow and Clydebank respectively.

The deaths referred to diseases of the respiratory system in the 16 Scotch towns, which had been 192, 162, and 180 in the three preceding weeks, slightly rose to 185 last week; 30 deaths were attributed to different forms of violence, against 23 and 44 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland with an aggregate population estimated at 1,199,180 persons at the middle of this year, 574 births and 533 deaths were registered during the week ended Saturday, March 8th. The annual rate of mortality in these towns, which had been 21·3, 24·1, and 23·1 per 1000 in the three preceding weeks, slightly rose to 23·2 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Irish towns averaged 22·0 per 1000; in the 96 large English towns the corresponding death-rate did not exceed 16·9, while in the 16 Scotch towns it was equal to 19·4 per 1000. The annual death-rate in the several Irish towns last week was equal to 23·0 in Dublin (against 18·3 in London and 21·9 in Glasgow), 23·3 in Belfast, 24·5 in Cork, 14·0 in Londonderry, 19·0 in Limerick, and 34·2 in Waterford, while in the remaining 21 smaller towns the mean death-rate was equal to 23·8 per 1000.

The 533 deaths from all causes in the 27 Irish towns were 1 in excess of the number in the previous week, and included 38 which were referred to the principal epidemic diseases, against 37 and 41 in the two preceding weeks. Of these 38 deaths, 18 resulted from measles, 9 from infantile diarrhœal diseases, 4 from whooping-cough, 3 from scarlet fever, 3 from enteric fever, and 1 from typhus, but not one from small-pox or from diphtheria. These 38 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·7 per 1000; in the 96 large English towns the corresponding rate did not exceed 1·3, while in the 16 Scotch towns it was equal to 2·0 per 1000. The deaths attributed to measles, which had been 10, 11, and 16 in the three preceding weeks, further rose to 18 last week, and comprised 10 in Belfast, 5 in Newry, 2 in Tralee, and 1 in Cork. The deaths of infants (under 2 years of age) referred to diarrhœa and enteritis, which had averaged 9 in the four preceding weeks, were again 9 last week, and included 4 in Belfast and 3 in Dublin. The fatal cases of whooping-cough, which had been 6, 8, and 11 in the three preceding weeks, declined to 4 last week, 2 of which occurred in Dublin. The 3 deaths attributed to scarlet fever were registered in Belfast. The 3 fatal cases of enteric fever were recorded in Cork, Limerick, and Dundalk respectively, and that of typhus in Dublin.

The deaths referred to diseases of the respiratory organs, which had steadily increased from 104 to 143 in the four preceding weeks, further rose to 156 last week. Of the 533 deaths from all causes, 151, or 28 per cent., occurred in public institutions, and 12 resulted from different forms of violence. The causes of 20, or 3·8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 96 large English towns the proportion of uncertified causes of death last week did not exceed 0·7 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeon: H. H. Gill to the *Irresistible*, on re-commissioning. Staff-Surgeons: J. A. Forrest to the *Berwick*; R. Hughes to the *Andromache*; J. S. Dudding to the *Irresistible*, on re-commissioning; and M. Cameron to the *Formidable*, on recommissioning. Surgeons: J. A. O'Flynn to the *Thunderer*; H. R. B. Hull to the *Fantome*, additional, for medical charge on voyage out, and to the *Fantome* on recommissioning; G. D. MacIntosh to the *Sealark*, additional, and to the *Sealark* on recommissioning; and R. N. W. W. Biddulph to the *Berwick*, on recommissioning.

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned gentleman has been appointed Surgeon:—James Richard Henry Turton (dated March 7th, 1913)

ROYAL ARMY MEDICAL CORPS.

Surgeon-General H. G. Hathaway has taken up duty at Lucknow Cantonment as Deputy Director of Medical Services to the Eighth (Lucknow) Division of the Southern Army in India.

Colonel C. E. Faunce, Assistant Director of Medical Services to the Chatham District, has been selected for appointment as Assistant Director of Medical Services to the Woolwich District and Officer in charge of the Royal Herbert Hospital, in succession to Colonel R. W. Ford placed on retired pay.

Lieutenant-Colonel F. W. G. Gordon-Hall, commanding No. 27 Company, Royal Army Medical Corps, at Hong-Kong, has been selected for the increased rate of pay under Article 317 of the Royal Warrant for Promotion. Brevet-Colonel and Lieutenant-Colonel C. H. Melville, lately professor of military hygiene at the Royal Army Medical College, Grosvenor-road, has returned home on leave of absence from India on medical certificate. Lieutenant-Colonel J. S. Davidson has been transferred from the Military Hospital at Allahabad to Agra Cantonment and appointed to Command the Military Hospital. Lieutenant-Colonel R. J. Windle has taken up duty at Poona Cantonment in charge of the Military Hospital. Lieutenant-Colonel J. Ritchie has been appointed to command the Military Hospital at Ferozepore on transfer from Dalhousie Cantonment. Lieutenant-Colonel H. P. G. Elkington has taken up duty at Shorncliffe in charge of the Military Hospital on transfer from Exeter, in succession to Lieutenant-Colonel D. V. O'Connell.

Major H. W. K. Read has embarked for a tour of service in India. Major E. B. Steel has been selected for appointment to hold charge of the Military Hospital at Exeter, in succession to Lieutenant-Colonel H. P. G. Elkington. Major R. W. H. Jackson has taken over charge of the Military Hospital at Weymouth on transfer from Lichfield. The Director-General, Army Medical Service, has approved of a transfer on the roster for foreign service between Major W. Tibbits, in charge of the Casualty Hospital at Chatham, and Major F. Harvey, in charge of the Military Hospital at Leeds. Major W. J. Taylor has left the Military Hospital at Colchester and embarked for a tour of service on the West Coast of Africa. Major T. C. McKenzie has been appointed to the Eastern Command. Major C. E. Fowler, specialist sanitary officer at Gibraltar, has been selected for appointment as Instructor to the School of Army Sanitation at Aldershot. Major R. McK. Skinner has taken up duty in the Dublin District. Major G. T. K. Maurice has been transferred from the Military Hospital at Tidworth Park, Salisbury Plain, to Reading. Major A. A. Seeds has taken up duty at the Military Hospital, Kasauli, on transfer from Rawal Pindi Cantonment. Major A. L. A. Webb has been selected for appointment as Specialist Sanitary Officer to the Scottish Command. Major S. F. St. D. Green, specialist in Midwifery and Gynæcology, has taken up duty at Quetta on arrival from the Aldershot Command. Major G. B. Crisp has joined the London District for duty. Major F. J. Palmer has taken up duty at the Military Hospital, Jutogh, Simla Hill District, on transfer from Meerut Cantonment. Major J. D. G. Macpherson has been appointed to command the Military Hospital at Kamptee Cantonment, on transfer from Pachmarhi. Major R. S. H. Fuhr, D.S.O., has been granted leave of absence on medical certificate from the Military Hospital at Colchester.

Captain A. L. Otway, at present stationed at the Military Hospital, Londonderry, has been placed under orders for transfer to Portsmouth on selection for appointment as Specialist Sanitary Officer to the Southern Command. Captain R. J. Franklin has relinquished medical charge at Fort Camden, Queenstown Harbour, and embarked for a tour of service in India. Captain H. W. Carson has been transferred from the Military Hospital at Cherat to Peshawar Cantonment. Captain J. C. Hart has been appointed to the Woolwich District for duty. Captain G. H. Stevenson, on arrival home from Ambala Cantonment, tour expired, has been appointed to the Northern Command for duty. Captain F. M. Hewson has arrived home from the Military Hospital at Hyderabad, Sind, on leave of absence. Captain A. B. Smallman has been selected for appointment as Assistant Sanitary Specialist at Aldershot. Captain E. C. Phelan has been transferred from the Military Hospital at Darjeeling to Barrackpore Cantonment. Captain M. D. Ahern has left Sheerness and embarked for

a tour of service in Bermuda. Captain B. G. Patch has been transferred from York to Bradford. Captain A. L. Foster, in command of the Military Hospital at Kalabagh, has arrived home from India on leave of absence. Captain T. S. Dudding, company officer of No. 9 Company, Royal Army Medical Corps at Colchester, has embarked for duty on the voyage to South Africa and back. Captain R. H. Nolan has been transferred to the Home Establishment from India on the expiration of his leave of absence. Captain H. Stewart has been transferred from the Military Hospital at Solon Cantonment to Ferozepore. Captain W. Mitchell has taken up duty at Subathu, on transfer from the Military Hospital at Ambala Cantonment. Captain W. W. Browne, specialist officer in physical training at Colchester, has embarked for a tour of duty in India. Captain N. E. Dunkerton has been appointed to the Military Hospital at Pontefract, on transfer from Bradford. Captain O. C. P. Cooke, in charge of the Cantonment General Hospital at Deolali, has been granted six months' leave of absence home from India. H.E. the Commander-in-Chief in India has selected Captain A. W. Gibson for appointment as Specialist in Operative Surgery to the Sixth (Poona) Division of the Southern Army. Captain H. Gall has been placed under orders for transfer from Gharial Cantonment, Murree Hills District, to the Military Hospital at Sialkot.

Lieutenant E. G. S. Cane has taken up duty in the Sixth (Poona) Division of the Southern Army in India. Lieutenant H. J. G. Wells has been transferred from Kinsale to the Military Hospital at Cork. Lieutenant C. H. Stringer has left the Royal Victoria Hospital at Netley and embarked for a tour of service in Jamaica. Lieutenant E. V. Whitby has taken up duty in the Cork District. Lieutenant R. F. Bridges, on arrival in India, has been detailed to join the Military Hospital at Rawal Pindi Cantonment for a course in Indian Sanitation. Lieutenant P. A. With has been transferred from Kilbride to the Curragh Camp. Lieutenant J. Hare has joined at Belfast.

INDIAN MEDICAL SERVICE.

Colonel G. W. P. Dennys, Inspector-General of Civil Hospitals in the Central Provinces, has been granted eight months' leave of absence home from India.

Lieutenant-Colonel T. E. Dyson has been granted one month's extension of furlough by the Secretary of State for India. Lieutenant-Colonel W. Molesworth, officiating professor of medicine, Madras Medical College, has arrived home on one year's leave of absence from India, on relief by Lieutenant-Colonel W. B. Lane.

On return from leave Major F. O. N. Mell, officiating Inspector-General of Prisons in the Central Provinces, reverts to his substantive appointment as Superintendent of the Central Jail at Nagpur. Major E. F. E. Baines has been granted eight months' leave of absence home from India. Major S. P. James has been placed on special duty under the Government of Ceylon for one year. On return from absence on leave Major A. M. Fleming has been appointed to Jubbulpore as Civil Surgeon in succession to Captain J. M. A. Macmillan. Major J. C. H. Leicester has taken over charge of the Purnea District Jail in succession to Captain N. W. Macworth. Major C. Milne, civil surgeon at Mussooree Cantonment, has been granted leave of absence for five weeks. Major W. D. A. Keys has arrived home on leave of absence from India.

Captain N. T. Wells has taken over charge of the duties of Civil Surgeon at Dera Ghazi Khan, relieving Captain H. C. Keates, who has been appointed Civil Surgeon at Campbellpore. Captain W. Gillitt has been selected for appointment as Superintendent and Medical Officer to the Bhagalpur Central Jail. Captain J. J. H. Nelson has arrived home on leave of absence from India. Captain H. Scott has been selected by H.E. the Governor of Madras for appointment as Surgeon on his personal staff. Captain J. Smalley has returned to India. Captain W. H. Riddell has been granted six months' extension of his leave of absence home from India, on medical certificate. Captain J. McPherson, officiating agency surgeon of the second class, on return to duty from leave, has been selected by the Foreign Office for appointment as Medical Officer to the Mewar Bhil Corps. Captain H. R. Dutton, civil surgeon at Midnapore, has passed the colloquial test examination in Bengali.

Lieutenant J. E. Wilkinson has arrived home on leave of absence from India. Lieutenant J. F. H. Morgan has received an extension of his leave of absence home from India.

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd London Sanitary Company, Royal Army Medical Corps: Lieutenant John Muir to be Captain (dated Dec. 7th, 1912).

Lowland Mounted Brigade Field Ambulance, Royal Army Medical Corps: Andrew Ross Muir to be Lieutenant (dated Feb. 7th, 1913).

3rd West Lancashire Field Ambulance, Royal Army Medical Corps: Lieutenant Richard Coffey to be Captain (dated Dec. 4th, 1912). Lieutenant Frank Hauxwell, from the Lowland Mounted Brigade Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated March 12th, 1913).

2nd Lowland Field Ambulance, Royal Army Medical Corps: Staff-Serjeant James Macdonald to be Quartermaster, with the honorary rank of Lieutenant (dated March 12th, 1913).

3rd South Midland Field Ambulance, Royal Army Medical Corps: Lieutenant-Colonel Arthur W. Prichard, on completion of his period of service in command of a field ambulance, is retired, and is granted permission to retain his rank and to wear the prescribed uniform (dated March 5th, 1913). Major James Young to be Lieutenant-Colonel (dated March 5th, 1913).

3rd London General Hospital, Royal Army Medical Corps: Lieutenant-Colonel and Honorary Surgeon-Colonel John Adams, on completion of his period of service in command of a general hospital, is retired, and is granted permission to retain his rank and to wear the prescribed uniform (dated March 12th, 1913).

Attached to Units other than Medical Units.—Captain James Scott to be Major (dated Jan. 21st, 1913).

For Attachment to Units other than Medical Units.—Squadron Sergeant-Major George Fawcett White, from the Essex Yeomanry, to be Lieutenant (dated March 8th, 1913). Edward Cuthbert Balfour Paul to be Lieutenant (dated Feb. 4th, 1913). Lieutenant Percy Wheeler Kent, from the 2nd Welsh Field Ambulance, Royal Army Medical Corps, to be Lieutenant (dated March 12th, 1913).

DEATHS IN THE SERVICES.

Deputy Inspector-General G. Saunders, C.B., at Tunbridge Wells, on March 6th, in his ninetieth year. He entered the army in 1845 as surgeon in the 47th Regiment, and after serving for some time in Ireland he went to the Crimea, 1854–55, where he was present at the battles of Alma and Inkerman. He was also present at the capture of Balaclava and at the siege of Sevastopol (medal with three clasps and Turkish medal). After the war he was ordered to the Cape, and later served with the 9th Regiment in China and Japan. As acting medical officer at Hong-Kong he had to deal with a great epidemic of cholera (mentioned in despatches and awarded the C.B.). He retired in 1871, devoting the rest of his life to medical missions.

Fleet-Surgeon R. L. B. Head, late R.N., at Wimbledon, recently, in his eightieth year. He entered the navy in 1857 as a surgeon, and was promoted to the rank of staff-surgeon in 1864 for his services at the attack on the batteries in the Straits of Simonoseki. In 1877 he was appointed fleet-surgeon, and retired in the following year.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

Major E. B. Steel, in the March issue of the *Journal of the Royal Army Medical Corps*, contributes a short note on Archibald Arnott, surgeon, 20th Foot, who professionally attended the Emperor Napoleon during his last illness, and was present at his death. The Emperor was warmly attached to Arnott, both on account of his professional ability and friendly and affable manner. He died at Kirkconnel Hall, Dumfriesshire, on July 6th, 1855, in the eighty-fourth year of his age. Colonel H. R. Firth, who has recently been analysing the height, weight, and chest measurements of young soldiers in the Indian army, writes an interesting appreciation of the physique of that army, arriving at the conclusion that the material from which the Indian army is recruited is good, and in the case of some particular races very good. Travelling Kitchens is the subject of a contribution from Captain N. Dunbar Walker, in which he discusses the various types of portable vehicles designed for

the purpose of supplying a moving army with properly cooked and hot food. Major W. S. Harrison returns to the subject which he commenced in the January issue of the *Journal*, when he produced arguments in favour of the view that, apart from well-recognised diseases like gout, gonorrhœa, and septicæmias, the symptom group commonly named "rheumatic fever" may be due to a variety of different causes, but reported in the same paper his complete failure to isolate the streptococcus rheumaticus of Poynton and Paine from the joint fluid of patients suffering from "rheumatic fever." In the present paper he gives some account of the results of cultures made with material obtained from the joints in 28 cases of rheumatic fever which, in his opinion, lend support to the proposition that the term "rheumatic fever" is probably applied to a group of diseases due to a variety of causes rather than to a single disease owning a single causation. Notes of some Experiments made to Determine the Rate of Absorbability and Intensity of Action of Quinine given Hypodermically and by the Mouth, as shown by the Minimum-Lethal-dose Method, by Major A. L. A. Webb, and Some Observations on the Bacteriology of Incinerator Smoke and Ash, by Captain J. J. H. Nelson, are other papers of interest.

ARMY MEDICAL ADVISORY BOARD.

The appointment of Sir Anthony A. Bowlby, C.M.G., to be Civilian Member of the Army Medical Advisory Board has been approved.

BRISTOL UNITS, R.A.M.C. (T.F.)

At the annual dinner of the Royal Army Medical Corps (Territorial Forces), Units of Bristol, which was recently held, a presentation of a handsome silver chalice cup on an oak plinth was made by the non-commissioned officers and men to Lieutenant-Colonel Arthur W. Prichard, V.D., who relinquished command of the 3rd South Midland Field Ambulance on March 5th.

ABOLITION OF SANITARY OFFICER AT ARMY HEADQUARTERS, INDIA.

The *Allahabad Pioneer* states that the Government of India, with the approval of the Secretary of State, has sanctioned the abolition of the appointment of a special sanitary officer at Army Headquarters (Assistant Director of Medical Services, Sanitary) with effect from Dec. 1st, 1912. No reason for the abolition of this important appointment, if it is to be abolished, has yet been made public, and details will be awaited with interest.

SMALL-POX IN THE NAVY.

Although there appear to have been no fresh cases of small-pox on board the new battleship *Conqueror* at Devonport, it has been decided to detain the vessel in port until after the Easter leave. Three sailors are in the isolation hospital ship *Maud* at Plymouth.

PARKES MEMORIAL PRIZE.

The prize of 75 guineas and the bronze medal of the Parkes Memorial Fund for 1913 have been awarded to Major S. Lyle Cummins, R.A.M.C., for his essay on "The Causation and Prevention of Enteric Fever in Military Service, with Special Reference to the Importance of 'Carriers.'" The subject for the next competition is "Heat-stroke: its Causes, Prevention, and Treatment." (The essay should bear evidence of the personal observations and experience of the writer.) Essays must reach the secretary of the Prizes Committee, Royal Army Medical College, on or before Dec. 31st, 1915. Each essay must bear a brief motto, and be accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. The competition is open to medical officers of the Royal Navy, Army, and Indian Services, of executive rank on full pay, with the exception of professors and assistant professors of the Royal Naval Medical College, Greenwich, and the Royal Army Medical College, London, during their term of office. The successful essay becomes the property of the Prizes Committee. The authors of unsuccessful essays can have them returned on application to the secretary, under their respective mottoes, giving an address to which they wish the essays to be sent.

THE Paris Academy of Sciences has elected Dr. Vuillemin, of Nancy, a Corresponding Member.

Correspondence.

"Audi alteram partem."

HEREDITY AND EUGENICS.

To the Editor of THE LANCET.

SIR,—In your issue of March 1st there appears a review of "Heredity and Eugenics,"[1] and in that review what is practically a quotation from Dr. Davenport's first lecture runs as follows: "When the characteristic is an undesirable one, eugenic principles advise that the affected person abstain from having children, though unaffected persons having the strain may safely marry unaffected persons with impunity, even though they be cousins." This refers to dominant characters, and in the case of undesirable characters which are recessive, Dr. Davenport says (p. 286): "The clear eugenic rule is then this: Let abnormals marry normals without trace of the defect, and let their normal offspring marry in turn into strong strains; thus the defect may never appear again. Normals from the defective strain may marry normals of normal ancestry; but must particularly avoid consanguineous marriages." He also states that albinism, insanity, and feeble-mindedness are recessive characters.

No objection can be taken to the discouragement of the marriage of defectives or of such consanguineous marriages, but the other dicta of Dr. Davenport seem to those of us who are working in the Galton Eugenics Laboratory to be most misleading and bound to do grave harm. Can Dr. Davenport's advice be justified even on his assumption that Mendelism applies to such cases? At the recent Eugenics Congress and in a variety of publications he has given the most definite advice regarding eugenic marriages, advice which can only bring the whole eugenic movement into disrepute.

Most damaging of all Dr. Davenport's statements is perhaps the following one that "a defective married to a pure normal will have no defective offspring" (p. 286). According to Dr. Davenport, such a mating is one of (DD) × (RR), which gives 100 per cent. (DR)'s. Every one of the offspring would thus carry the defect even if they themselves show no sign of it, and in a generation or two all knowledge of the latency of the defect would be lost. Intermarriage into like stock with scanty knowledge of ancestry will then reproduce the defect in all its vigour. But has any evidence been given that the children of such matings of defectives and pure normals are even apparently normal? Dr. Davenport and Dr. Weeks have made a study of the inheritance of epilepsy[2] (which they regard as interchangeable with feeble-mindedness), and at the recent Eugenics Congress Dr. Weeks contributed a paper on their results. What, then, is the nature of the evidence that the marriage of defective and pure normal produces no defective offspring? In the first place, Dr. Weeks states that all the offspring will be (DR)'s, which are "frequently" indicated by an "intermediate mental status." Such intermediates are principally alcoholic or neurotic, but also include cases of such varied *mental* (!) conditions as unchastity, shiftlessness, congenital syphilis, insanity, and neuralgia! It is thus a little difficult to understand Dr. Davenport's advocacy of such matings.

Further, Dr. Weeks at the Eugenics Congress devoted a section of his paper[3] to the mating of defective and pure normal, and finds that out of 125 children who are classified, 39 are epileptic, 14 are feeble-minded, 26 are neurotic, while only 46 are normal. According to the author, however, this does not upset his theory, but only shows that these matings ought not to have been entered in this section at all! Of the ancestors of the parents entered as pure normals, some are said to have shown mental or nervous weakness, of others nothing is known, while of the remainder Dr. Weeks says: "Judging from their offspring, we believe that subsequent data will show that those apparently mentally normal parents descended from tainted ancestors."

In other words, his statement that the marriage of defective and pure normal produces no defective offspring is

[1] By Professors Castle, Coulter, Davenport, East, and Tower. University of Chicago Press, 1912.
[2] Eugenics Record Office Bulletin, No. 4.
[3] Problems in Eugenics (Eugenics Education Society), p. 72.

derived solely from the rejection of the whole of his own material as not suiting his *a priori* theory. No other data are offered in its support; not a single case of the mating of defective and pure normal is left, either to prove or to disprove his theory. Cases are on record of other defects where no defective has appeared in the ancestry for five generations, yet owing to the presence of a so-called (DR) ultimately mating with another (DR), the defect has appeared in full force in the offspring. Clearly from the eugenic standpoint it is absolutely necessary to limit the production of those (DR)'s by prohibiting the very marriages which this American school of eugenics ventures to recommend so strongly.

Much the same method has been adopted by another American investigator, Dr. Goddard, in his study of the Kallikak family. Finding exceptions to the Mendelian rules in his material, he says: "We may account for these two exceptions in one of several ways. Either there is a mistake in calling them normal or a mistake in calling the parents feeble-minded, or else there is illegitimacy somewhere, and these two children did not have the same father as the others of the family. Or we may turn to the Mendelian law, and we discover that according to that law there might be in rare instances such a combination of circumstances that a normal child might be born from two parents that function as feeble-minded." Thus the facts are to be considered as elastic, and if that fails we are to make the theory plastic enough to cover the facts. To give definite advice regarding marriage on the basis of methods such as these can only discredit the whole science of eugenics.

I am, Sir, yours faithfully,

DAVID HERON, D.Sc.
Assistant Director of the Galton Laboratory.
University College, London, March 7th, 1913.

WHEN TO OPERATE IN APPENDICITIS.

To the Editor of THE LANCET.

SIR,—Mr. Edmund Owen's letter in your last issue makes perfectly clear what in my opinion his paper did not, and that is that he would operate on every case of appendicitis as soon as ever the diagnosis is made. He would prefer, he says, that the diagnosis was made within the first 12 hours of the illness, but the fact that those ideal hours had been overstepped should not stand in the way of an immediate operation, so that no matter at what stage of the attack the patient is seen, and no matter what the abdominal conditions present, removal of the appendix ought to be carried out at once as "the only way to make *safe* against surprises, dangers, and fatal results."

Had I been present at the discussion on Mr. Owen's paper I would most certainly have combated that view, which has nothing of a *principle* in it, but is merely a *rule of practice* based on the "fixed ideas" of Mr. Owen and the surgeons who supported him, and I think I could have shown that during recent years other surgeons, not satisfied with the results obtained under Mr. Owen's rule, have carried out other lines of treatment, which fill the rôle of "control-experiments" and throw grave doubts on the correctness of applying the "immediate operation" teaching indiscriminately to all cases of acute appendicitis.

In his paper Mr. Owen regrets that a previous communication of his to a medical paper elicited a correspondence which drifted into such a wordy warfare that the main object of the communication became somewhat obscured, and the editor brought the correspondence to an end. As I furnished on that occasion a good deal of the "controversial ammunition" I am unwilling to create again a similar condition of things and obscure an issue which is now perfectly clear. Mr. Owen and his supporters hold that the high and regrettable mortality in the surgical treatment of acute appendicitis is due to the non-application of the "immediate operation" course of treatment. Other surgeons, and I side with them, are satisfied that it is the universal application of the "immediate operation" promiscuously to all cases of acute appendicitis that is responsible for the heavy mortality in the surgical treatment of these cases, there being a large proportion of them with localised inflammation that after the attack has existed for two or three days are best managed by trusting to the defensive powers of the peritoneum and aiding its efforts by therapeutical and other measures. My results in 300 hospital cases have not shown that I have over-estimated this defensive power of the peritoneum when helped and encouraged. I quite agree with Mr. Owen that no captain is justified in bringing his ship at high speeds through fields of Atlantic ice, but the "immediate operation" seems to me to be uncommonly like doing so when applied in acute appendicitis of two or three days' duration.

I am, Sir, yours faithfully,

Glasgow, March 8th, 1913. GEORGE THOS. BEATSON.

To the Editor of THE LANCET.

SIR,—At the recent discussion at the Medical Society of London Mr. Edmund Owen and the speakers who followed him emphasised the importance of early operation. I imagine that all surgeons would agree with this view. If every case of appendicitis were submitted to operation within the first 24 hours the mortality, at present far too high, would almost disappear. But for a variety of reasons far the greater number of cases do not come under the care of the operating surgeon till a later stage, after the most favourable period for operation has passed.

What should be done in these cases? Ought they to be operated upon at once whatever the stage of the disease, or is it wiser and safer to delay in certain cases? I think the general opinion is that at any stage immediate operation should be performed, and that "delay is dangerous." But I feel convinced that there are many cases in which it is wiser to withhold the knife for a few days.

Mr. Owen referred to the supposed danger of operating about the fifth or sixth days. He said "it is generally considered that operations about the fifth or sixth day have a peculiarly high mortality," but he goes on to indicate his disbelief in this, which I believe was the opinion of Sir Frederick Treves a good many years ago. Mr. A. H. Burgess gave statistics from his own practice which have a very interesting bearing on this point. Out of 606 consecutive operations for acute appendicitis during the past seven years he finds a mortality for operations done on the first day of 2·1 per cent., on the second 2·8 per cent., on the third 5·3 per cent., on the fourth 9·6 per cent., on the fifth 19·2 per cent., on the sixth 22·7, but on the seventh 8 per cent., and the second week 6·9 per cent., the third week and after 6·1 per cent. (I quote these figures from THE LANCET of Feb. 22nd). Surely they will need some consideration. Why should there be a gradual rise after the second day to 9 per cent. on the fourth, and a sudden bound to 19 per cent. on the fifth and 22 per cent. on the sixth, and, even more remarkable, a fall to 8 per cent. on the seventh day, and to 7 per cent. or 6 per cent. on subsequent dates? Do not these figures substantiate the contention that there is a real danger in operating about the end of the first week, which danger is much lessened after a day or two's interval? Would delay of a few days at this period entail a mortality of more than 10 per cent.—that is to say, if cases which come for operation on the fifth or sixth day were kept waiting till the seventh, eighth, or ninth days, would more than 10 per cent. of them die in the interval? Who can believe it?

It has happened to myself, and I am sure to many other surgeons, to operate upon a case (frequently a child) with a well-defined abscess surrounding the appendix at about this stage. The patient seems in a satisfactory condition before the operation, the operation is rapidly and apparently satisfactorily performed, the condition after the operation is apparently satisfactory, and yet, within 24 hours, a sudden change takes place, the temperature and pulse go up, the face becomes pallid, restlessness with drowsiness or delirium come on, and death follows in a few hours. I believe some of these deaths are put down to delayed chloroform poisoning, shock, or other causes, even to bad luck, but I believe they are due to septicæmia from infection of the blood at the time of operation. In the effort of nature to resist the infection three lines of defence are set up. The first two are developed early, but the third is not fully established till after the first week. The first is the layer of fibrinous exudate covering the peritoneal surface near the focus of infection, and sealing off the peritoneal stomata, and thus preventing bacterial invasion of the lymph stream and blood, while allowing soluble toxins to pass through. The second (which accompanies the first) is the agglutination of neighbouring coils of intestine, omentum, &c., shutting out the infected pus from the general cavity of the peritoneum. But the third, which is of great importance,

takes longer to develop. I refer to the immunity set up in the blood by the gradual absorption of toxins and production of antibodies. It is this which gives the relative freedom from danger to operations during the second week or later.

By operating on the fifth or sixth day, in a case where there is a definite abscess, it is possible to remove some of the protective layer of fibrin from the surface of the intestine and allow a ready means of ingress, or even actually to inoculate virulent germs into the blood, which, owing to the absence of antibodies in sufficient amount, after a short incubation period, bring about a rapidly fatal septicæmia. I have recently seen a case in which removal of a couple of thrombosed piles was followed after 24 hours by a rapidly fatal septicæmia due to the Klebs-Löffler bacillus. The organism was found to be present in the thrombosed piles, and in large numbers in blood from the heart and pericardial fluid very shortly after death. Should operation be performed during this dangerous period as little as possible should be done beyond giving exit to the pus, and no attempt made to remove the appendix.

I am, Sir, yours faithfully,

HERBERT H. BROWN, M.D. Lond., F.R.C.S.

Ipswich, March 9th, 1913.

THE ROYAL SOCIETY OF MEDICINE AND THE SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

To the Editor of THE LANCET.

SIR,—At the end of last October the joint secretary of the Society of Tropical Medicine and Hygiene forwarded to the Fellows of the society a memorandum prepared on June 1st previously—that is, five months before—concerning negotiations between the Royal Society of Medicine and the Society of Tropical Medicine and Hygiene for the amalgamation of the two societies.

From this memorandum it would appear that the Royal Society of Medicine invited the Tropical Society to become its tropical section. It further appears that the council of the Society of Tropical Medicine and Hygiene entered into negotiations with the Royal Society of Medicine with the fixed determination of refusing the amalgamation. It is not apparent, therefore, wherein the use of the conference lay, nor for the matter of that where the "courtesy" was of wasting other people's time over negotiations predestined to be futile. The terms offered by the Royal Society of Medicine are very generous, and have been refused for reasons which, so far as they have been given in the memorandum, are entirely inadequate.

The Royal Society of Medicine was formed by the amalgamation of previously existing medical societies, and the intention, I take it, is that the range of this society should be coextensive with medicine; appropriately, therefore, it is establishing a Section of Tropical Medicine. In doing so it courteously invited the Society of Tropical Medicine and Hygiene to become that section. As a Fellow of the Society of Tropical Medicine and Hygiene I hold that in a matter of such importance the views of the Fellows of the society generally should have been and should now be taken. It is conceivably possible that their view may differ from that of the council who reside in London. The advantages which would accrue to the Society of Tropical Medicine and Hygiene from amalgamation with the Royal Society of Medicine are set forth in the memorandum referred to above, and also in a letter which appeared over Dr. Carnegie Brown's signature in THE LANCET and *British Medical Journal* in November last. In the fifth annual report of the council of the Society of Tropical Medicine and Hygiene the council "regret that, so far, they have been unable to find at a reasonable cost quarters which would be suitable for the use of the Fellows." Yet such quarters—palatial quarters—are offered to them by the Royal Society of Medicine, and with this "access to its magnificent library, to its wealth of continental, American, and British literature, and to the help in research which is so readily rendered by an exceptionally qualified staff of librarians." Are these not exactly what the worker in the remote parts of the empire wants? Why are these advantages refused? Firstly, laymen, who form 2·6 per cent. of the Society of Tropical Medicine and Hygiene, are ineligible for admission to the Royal Society of Medicine. In a *medical* society the interests of the *medical* members should be paramount. It is, too, surely open to negotiation that while non-medical men should not in future be eligible for membership, those now members of the Society of Tropical Medicine and Hygiene should remain members of the section, and that in future such lay persons as are interested in tropical medicine should become Associates with right of attendance at meetings and right to the transactions of the Tropical Section. Secondly, persons who are not registered are ineligible for membership of the Royal Society of Medicine, and therefore persons with registrable but unregistered diplomas would be ineligible. This is surely a quibble. Doubtless the Royal Society of Medicine would consider a modification of their rule in the case of persons residing in a part of the empire where British registration is not in force. Thirdly, the cost to individual Fellows. This would not affect present Fellows—only prospective ones. I imagine most men would willingly pay 2 guineas entrance for the use of the Royal Society of Medicine buildings and library—the annual subscription in the Tropical Section of the Royal Society of Medicine would be the same as that for the Tropical Society. Fourthly, the Society of Tropical Medicine and Hygiene offer special terms to missionaries which the other society would not. I have no wish to make things difficult for medical missionaries, but the interests of a small fraction of the membership should not stand in the way of an amalgamation otherwise desirable. Fifthly, the curtailment of the nomination of honorary Fellows; this surely is a small matter. And in any case the Fellowship of the Royal Society of Medicine would always be a greater distinction than that of Fellow of a tropical society. Sixthly, "the prestige and individuality" of the Society of Tropical Medicine and Hygiene, "and especially the benefits which it has been able to offer to its foreign Fellows," would not be enhanced by the amalgamation. The Society of Tropical Medicine and Hygiene was started for the benefit of British Fellows—if amalgamation is to their benefit, as is admitted, then no consideration for foreign Fellows should be suffered to stand in the way. Seventhly, there is a small sum of £300 now standing to the credit of the Society of Tropical Medicine and Hygiene. In consideration of the fact that the Royal Society of Medicine is willing to admit all present Fellows of the Tropical Society without entrance fee, it is not unreasonable that the larger society should pocket this amount. It is only the entrance fee of 150 persons.

The fact of the matter is, there are too many tropical journals for the *clientèle* available. Where are two tropical societies and four or five journals or transactions to find material and subscribers? When the Society of Tropical Medicine and Hygiene was started most I imagine believed, as I did, that the new society would attract to itself all the British workers in tropical medicine and that its proceedings would become the principal British medium for the communication of all advances in the knowledge of tropical disease. This has not proved to be the case, and is still less likely to be the case in future when there exists a Tropical Section in the Royal Society of Medicine.

I hope Fellows who take the view I have outlined above will give notice to the Society of Tropical Medicine and Hygiene that unless the question of amalgamation is referred to the Fellows of the society as a whole they will withdraw from its membership.

I am, Sir, yours faithfully,

J. B. SMITH,
Lieutenant-Colonel, I.M.S.

Poona, India, Feb. 20th, 1913.

ATYPICAL EXOPHTHALMIC GOITRE.

To the Editor of THE LANCET.

SIR,—The first of the Lettsomian lectures published in THE LANCET of March 1st is of much interest both to surgeons and to physicians. In it Mr. James Berry refers (p. 585) to a short paper of mine[1] as an example of "the tendency at the present day to include under the headings of exophthalmic goitre or hyperthyroidism a very large number of instances of simple parenchymatous goitre with some rapidity of pulse."

I think the present-day tendency is to accept cases showing indications of excessive or possibly perverted action of the thyroid gland as examples of either typical or atypical

[1] Brit. Med. Jour., Feb. 1st, 1913, p. 208.

exophthalmic goitre, except in those cases where thyroid extract is being administered to the patient. In this connexion I may quote Dr. G. R. Murray[2] who asserts that to diagnose Graves's disease there should be present a pulse-rate of over 90 per minute, and either slight exophthalmos, some enlargement of the thyroid, or tremor; two or three of these symptoms, in his opinion, and in that of most authorities, are sufficient to diagnose exophthalmic goitre. In the first 21 cases of my table these conditions were fulfilled. Dr. Murray also states[3] that simple parenchymatous goitre is distinguished from exophthalmic goitre by the absence of tachycardia and other symptoms of Graves's disease. The case No. 9 to which Mr. Berry evidently refers in particular had definite signs of Graves's disease—namely, flushing, headaches, palpitation, restlessness, excessive sweating, pulse 110 per minute, with slight enlargement of the thyroid. It cannot, therefore, be regarded as a case of parenchymatous goitre. I attributed the affection in this case to hyperthyroidism in a developing female at the age of puberty in whom the thyroid gland was impelled to increased activity and overdid its part. Case 8, in addition to frequent pulse, had palpitation, flushing, nervousness, and headaches. The other case to which exception might be taken is, I think, No. 18, which I described as an apparently alternate condition of hypo- and hyperthyroidism. In this instance there are serious objections to its inclusion in a list of atypical exophthalmic goitre cases, but the abnormal thyroid activity seems to justify its consideration in this group. Cases 22 and 23, as stated in my paper, were included with the object of drawing attention to the resemblance which so often exists between menopause disturbance and hyperthyroidism. I cannot agree, therefore, that my table contains cases which may not be fairly regarded as exophthalmic goitre.

It is a truism that many cases of early or atypical exophthalmic goitre are not recognised, and I regard this unfortunate name of the disease as largely responsible for the error. In many instances of undoubted hyperthyroidism exophthalmos is absent, and goitre is difficult or perhaps impossible to demonstrate. It was in order to draw the attention of practitioners to this error that I read the paper at a medical meeting here.

I am, Sir, yours faithfully,

Belfast, March 5th, 1913. H. L. MCKISACK.

MEDICAL INCUNABULA.

To the Editor of THE LANCET.

SIR,—In connexion with the German Commission for a General Catalogue of Incunabula the Bibliographical Society is collecting information upon the incunabula in the libraries and elsewhere in this country. To this I should like to call the attention of those interested. It is easy to get the necessary information from the libraries of the Royal Colleges, but I would like particularly to know of: (1) any fifteenth century medical works in the libraries of the hospitals and medical societies; (2) medical incunabula in private collections.

I am, Sir, yours faithfully,

WILLIAM OSLER,

March 8th, 1913. President of the Bibliographical Society.

GASTRO-ENTEROSTOMY IN PERFORATING ULCER.

To the Editor of THE LANCET.

SIR,—In his very interesting paper on perforation of gastric and duodenal ulcers, published in your issue of March 1st, my friend Mr. Edred M. Corner has made two curious errors, which I feel sure were unintentional and which he will be glad to have corrected. Mr. Corner attributes to Sir Berkeley Moynihan the suggestion that gastro-jejunostomy should be performed at the same time as suture of a perforated ulcer. He states further that Sir B. Moynihan made this suggestion "very deliberately." May I point out, first, that the words "very deliberately" were used by Sir B. Moynihan in quite another connexion—namely, in stating his belief that shock is absent in early cases of perforation, and had no relation whatever to the question of the advisability of performing gastro-jejunostomy in *all* cases of perforation; secondly, if Mr. Corner will honour me by reading the Hunterian Lectures for 1906,[1] delivered nine months before the discussion alluded to, he will find that in those lectures I made the suggestion which inadvertently he has attributed to Sir Berkeley Moynihan. The reasons I adduced in support of my suggestion were stated in full by Mr. Mayo Robson in the address with which he opened the discussion. Sir Berkeley Moynihan not only did not make the suggestion originally, but actually disagreed with it. I should not have called attention to this historical inaccuracy had it not been that Mr. Corner, like others of my critics, is under a misapprehension as to the reasons for which I urge this practice. He assumes that the main object of the gastro-jejunostomy is to improve the after-condition of the patient. Nothing is further from the truth. My reason is that it increases the patient's immediate chance of recovery; the ultimate result is of secondary importance. My suggestion has been much criticised, but more extended experience only has convinced me that it is right, and I am gratified to know that many of my former critics have come round to this view and now adopt a similar practice. The performance of gastro-jejunostomy, together with suture of the ulcer, is not an "exhibition of surgical agility at the patient's expense," but a life-saving procedure, for I am firmly convinced that it adds greatly to the patient's prospect of recovery, ensures a more speedy convalescence, and incidentally, in a considerable proportion of cases, improves the ultimate result.

Mr. Corner raises many other interesting points which space will not permit me to discuss. I must, however, record once more an emphatic protest against the expediency of occluding the pylorus when performing gastro-jejunostomy. In my judgment this procedure is totally unnecessary, is based on erroneous pathology, and is therefore a species of meddlesome surgery. Nor can I agree that "in the absence of pyloric obstruction a gastro-jejunostomy opening tends to close." Closure of a gastro-jejunostomy opening is often diagnosed but seldom seen. Such closure, when it does occur, has nothing whatever to do with the patency of the pylorus. It is the result of a gastro-jejunal ulcer, of which the origin is due to faulty technique and the persistence to inefficient after-treatment.

It seems inevitable that some misconception or other should be prevalent with regard to the operation of gastro-jejunostomy. A few years back we were confronted with the bogey that gastro-jejunostomy interferes with metabolism. That bogey is now dead, and I think that I may claim the responsibility for its obsequies. Exclusion of the pylorus and closure of gastro-jejunostomy openings in cases of patent pylorus are hardy annuals, but I do not despair that in time even they will follow their predecessor to the tomb of oblivion.

I am, Sir, yours faithfully,

HERBERT J. PATERSON.

Upper Wimpole-street W., March 6th, 1913.

A QUESTION IN LUNACY CERTIFICATION.

To the Editor of THE LANCET.

SIR,—With regard to the letter of "B.A., M.D." on p. 733 of THE LANCET of March 8th and your reply, the suggestion of the help of the relieving officer in regard to a club patient is not likely to raise the point of the urgency order and the urgency certificate, for this procedure only concerns private patients. The case plainly is not that of a private patient, but of a pauper, and, as you know, in lunacy there is one law for the rich and another for the poor. When any person becomes insane who cannot afford to pay at least about 30*s.* a week for his or her maintenance, he or she has to be cared for as a pauper in a county or a borough asylum—hence the not infrequent appearance of members of the professional classes, such as doctors, barristers, and the clergy, as pauper patients in public asylums. Only in the London asylums and some few others is the patient classed on the "private list" who pays just the maintenance rate—viz., about 10*s.* 6*d.* per week.

The points raised by your questioner are, to medical men who have to deal with the insane, interesting. This patient is evidently about to be admitted, either through the workhouse (Poor-law) infirmary, or, maybe, direct from his own

[2] Ibid., Feb. 13th, 1909. [3] Loc. cit.

[1] Gastric Surgery, 1906, p. 82.

home through the help of the relieving officer, into the local public asylum. As is well-known, the relieving officer, when informed of the presence of an insane person within his district, is bound by Act of Parliament to take immediate steps, and must within three days bring the alleged lunatic before a justice, whose duty it is to order the person to be medically examined, and he may summon any registered medical man to do so. The request to examine such a person is an official and a legal one, and although B could refuse to do this, yet he would be unwise not to comply, as were serious consequences to ensue through delay he would probably be severely censured by a jury, who might consider that he sacrificed the public welfare to personal feeling or professional etiquette. Of course, if B knew the patient to be A's, it would have been correct and considerate for him to have informed A that he had acted in regard to his patient upon the magistrate's order and under the Lunacy Act.

In such a case as your questioner puts forward only one medical certificate is required, and the justice is perfectly within his power in asking his own medical attendant, in whom presumably he has confidence, to come to his assistance to fill up and sign the certificate. The point is further raised whether an *ex officio* justice has power to sign the order for the patient's detention. In the case of pauper patients all that is required is that the justice should have jurisdiction in the district where the patient is at the time, and although the chairman of the board of guardians is *ex officio* a justice of the peace (and the same applies to the chairman of an urban district council), the Lunacy Act, 1891, 54 & 55 Vict., Sec. 25, enacts that such an authority has this power only when the Lord Chancellor empowers (in writing) the chairman to sign an order of reception for pauper lunatics, and it would seem that this power can only be used in the case of paupers (in workhouses or in Poor-law infirmaries) who ought to be removed to an asylum under Section 24, Subsection 6, of the Lunacy Act, 1890, 53 & 54 Vict., c. 5, and in all probability this is what occurred in this instance. Of course, for private patients such a person as the chairman of the urban district council could not sign an order for detention. The Lunacy Acts, 1890 and 1891, make special provision for justices to be appointed at their Michaelmas sessions for this purpose, and lists of such justices for each county and borough are issued to different authorities, and certainly there seems to be no dearth of "special justices" for signing Lunacy Orders. In London there is a perfect mob of these justices, numbering altogether about 400; yet occasionally applicants with orders will go for signatures to justices not "specially appointed," but who generally are obliging enough to sign the order; still unless the order is further countersigned by a justice "specially appointed" it will be invalid. Formerly, under the Lunacy Act, 1890, only justices having jurisdiction where the patient was at the time could sign this order, but the Lunacy Act, 1891, abolished this limitation, and a justice "specially appointed" for London can now sign an order for a patient, even in Northumberland, and *vice versa*. Your questioner has raised some very interesting points to many medical men, hence my somewhat lengthy letter.

I am, Sir, yours faithfully,

Claybury, March 10th, 1913. ROBERT JONES, M.D. Lond.

*** Our readers will appreciate as we do Dr. Jones's lucid exposition of some difficult points.—ED. L.

THE ABDOMINO-PERINEAL OPERATION FOR RECTAL CANCER.

To the Editor of THE LANCET.

SIR,—I have read with interest Mr. C. Gordon Watson's and Mr. P. Lockhart Mummery's letters. Both these gentlemen lay some stress on the disadvantage of the presence of an artificial anus at the second operation. It is, of course, a disadvantage, but one that can be easily overcome, and has frequently to be faced under other circumstances. For instance, if a growth of the colon is present causing obstruction, the first step is to perform a cæcostomy; later the growth is excised with end-to-end union or lateral anastomosis if possible; and thirdly, some operation is performed for doing away with the artificial anus. Here two operations have to be performed in the presence of an artificial anus, and the situation is much less satisfactory than in the case of an inguinal colostomy, in that the fæces are fluid and more irritating. Yet these operations are very rarely followed by peritonitis. As a matter of fact, in this operation under discussion the danger is surely of pelvic sepsis more than of peritonitis.

My suggested modification of the existing operation would, in my opinion, greatly diminish the risk of pelvic sepsis, while perhaps slightly adding to the risk of peritonitis, though this added risk would be largely compensated by having an empty bowel to divide and not having to pass the upper end through a stab wound in the flank. Mr. Mummery in his letter intimates that I have put the mortality too high. No doubt he is right, but I only intended my figures to be approximate, and they were derived from a consensus of opinion of writers on this subject.

Again, Mr. Mummery admits to a mortality of something under 20 per cent., but has only lost one case from sepsis during the last three years. Are all these deaths to be attributed to shock with the exception of the cases of embolism? Also, if they are due to shock one would like to know how soon they died after the operation, and if in any cases that lingered and died of "delayed shock" or exhaustion the absence of sepsis was proved by a post-mortem examination? In my limited experience I have known death occur in afebrile conditions, and yet it has been due to rapidly spreading sepsis, and it is especially after these big exhausting operations that it is apt to do so.

Finally, though embolism is usually looked upon by operating surgeons as a "visitation," are these distressing cases really free from the slur of sepsis? I can only say that of the four cases I have seen three occurred in cases of suppurating appendicitis and the fourth was a suppurating prostatectomy. It is rather tempting to believe that the thrombosis was started by the infection of veins, and that later the clot was softened and loosened by the action of microbes. Whether this is so or not could easily be proved by examining the clot, when it can be found post mortem, for micro-organisms.—I am, Sir, yours faithfully,

R. LEONARD LEY, M.B., B.C. Cantab.

Great Yarmouth, March 10th, 1913.

PERITONEAL ADHESIONS.

To the Editor of THE LANCET.

SIR,—In the very interesting Hunterian lecture of Mr. J. E. Adams, published in your issue of March 8th, reference is made to the results of certain experiments which I carried out relative to the use of sterile vaseline oil as a lubricant to prevent peritoneal adhesions, and it is stated that, after employing this oil, I had found "cream-cheese-like masses in the abdomen and advised against its use." Now in the paper referred to ("The Use of Oil in Abdominal Surgery"[1]) I came to no such conclusion, but to the very reverse—namely, that vaseline oil is a bland, inert, readily sterilisable and altogether safe lubricant to introduce into the peritoneal cavity, and that it will delay and thus to some extent prevent the re-formation of adhesions. The "cream-cheese-like masses" referred to were found in another series of experiments, where sterile olive oil had been introduced in cases of peritonitis with the object of delaying the absorption of bacteria from the peritoneal cavity. This erroneous interpretation of my results was initiated by Crump,[2] and my purpose in writing now is to prevent, if possible, its being perpetuated.

Whilst the introduction of foreign bodies into the peritoneal cavity is, as a general rule, to be avoided, I believe that, in cases where extensive raw surfaces have been exposed as the result of breaking down peritoneal adhesions, the best method to prevent the latter re-forming is to introduce several ounces of sterile vaseline oil before closing the abdomen, and then at the earliest possible moment to encourage peristalsis, firstly by hypodermic injections of pituitrin and then by enemata and by purgatives. The absorption of vaseline oil from the peritoneal cavity is not complete for at least ten days, and if during this period the bowels be kept moving a minimum of fresh adhesion will be secured. I am, Sir, yours faithfully,

Edinburgh, March 10th, 1913. D. P. D. WILKIE.

[1] Surgery, Gynæcology, and Obstetrics, February, 1910.
[2] Ibid., November, 1910.

THE EXHIBITION OF RAYNAUD'S PHENOMENA.

To the Editor of THE LANCET.

SIR,—I have read with much interest the account of Dr. Ibotson's case in THE LANCET of Feb. 15th. Instances of cases exhibiting such symptoms are, I think, worthy of more notice than they generally receive, for, judging from my own experience, they appear to be of by no means infrequent occurrence. I believe that Dr. Ibotson is fully justified in his diagnosis of implication of the sympathetic branch controlling the vascular supply of the arm. I would point out that such symptoms are not necessarily associated with the presence of cervical ribs. They may occur in cases where the first rib is anatomically normal.[1]

Like the sensori-motor changes in "cervical rib," they usually appear in early adult life, but may be exhibited at any age. Modification in the position of the shoulder coincident with growth seems to determine their occurrence in certain instances (see reference already quoted). In others, specialised use of the arm would appear to stimulate their appearance, as in Dr. Ibotson's case. The pathological changes which occur in certain of these individuals I have figured in the *Journal of Anatomy and Physiology* for January, 1913.

The subject has, however, developed unexpectedly into one of wide significance, and for further elucidation reference may be made to recent volumes of the *Journal of Anatomy and Physiology* and the *Anatomischer Anzeiger*. It is especially interesting to read Dr. Ibotson's account of complete recovery, a termination which is no less surprising than it is gratifying, if the pathological appearances to which I have made reference are to be considered typical of the condition. It is, however, probable that no such advanced changes as I have figured had occurred in Dr. Ibotson's case.

I am, Sir, yours faithfully,

T. WINGATE TODD.

Anatomical Laboratory, Western Reserve School of Medicine, Cleveland, Ohio, U.S.A., Feb. 27th, 1913.

THE TREATMENT OF PNEUMONIA BY ASPIRIN.

To the Editor of THE LANCET.

SIR,—Referring to a letter in THE LANCET of June 3rd, 1911, in which Mr. A. Scott, of Brighton, recorded eight successful cases in which 10–15 gr. of aspirin at the outset of an attack of pneumonia had apparently caused the disease to abort, and invited a trial by other members of the profession, I wish to state the following facts. I have been giving aspirin freely since that time to both pneumonia and typhoid patients, and have had much success in both diseases, but more especially in the former. On looking through the charts of our hospital for the last one and a half years I find seven cases in which I think one can clearly claim that the pneumonic condition was arrested before the time that the usual crisis was due. Our work lies chiefly among the Indian people of the native State of Travancore. Pneumonia in the rainy or colder season is fairly common and runs a typical course, with all the classical symptoms. The crisis sometimes happens on the seventh day, but is frequently delayed till the tenth or even the eleventh day. Herpes on the lip is never seen, but the physical signs and rusty sputum, with the presence of pneumococci in it, are absolutely pathognomonic.

The seven cases referred to above were: 1. Female, aged 9, with typical pneumonic consolidation, admitted fifth day. Respirations 48; pulse 120. 8 gr. aspirin given. Crisis on sixth day. Respirations fell to 30 and next day to 24. 2. Female, aged 12, admitted second day, with increasing dulness and crepitations. Respirations 38; pulse 112. 10 gr. of aspirin given on fourth day. Crisis on fifth day. Respirations fell to 26; pulse 84. 3. Female, aged 22, admitted fourth day. Respirations 36; pulse 116. Dose of 10 gr. aspirin given on fourth and fifth days. Crisis on sixth day. Respirations 24; pulse 92. 4. Male, aged 25, admitted fifth day. Dose of 8 gr. aspirin given. Respirations 36, fell to 26; pulse from 92 to 72. Crisis on sixth day. 5. Male, aged 10, admitted third day. Aspirin 8 gr. given on fourth day. Crisis on fifth day. Respirations 48, fell to 24; pulse from 112 to 78. 6. Male, aged 55, admitted on fifth day. Two doses of 8 gr. aspirin given. Crisis on sixth day. Respirations fell from 66 to 34; pulse from 95 to 56. 7. Male, aged 23, admitted on third day. Three doses of 8 gr. aspirin given. Crisis on fourth night (early fifth morning). Respirations fell from 56 to 22; pulse from 120 to 74.

All these cases recovered without any after complications. An eighth case did not respond so well. Three doses of 8 gr. aspirin were given from fourth to seventh day, but the crisis occurred only on eighth day.

It might be argued that these cases were of a rheumatic origin, and therefore benefited by a drug of the salicylate class. In these parts of Southern India acute rheumatism is practically unknown, and it is difficult to believe that such an explanation can account for the good results which are certainly obtainable by the use of aspirin in the early stage of pneumonia.

Is it due to the rapid elimination of toxins through the skin, &c., brought about by the profuse perspiration which aspirin invariably causes? I shall be glad of further light on this subject.—I am, Sir, yours faithfully,

JAMES DAVIDSON, M.D. Edin.

Neyoor, Travancore, South India, Feb. 16th, 1913.

[1] See Descent of the Shoulder after Birth, Anatomischer Anzeiger, Band xli., 1912.

THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION FOR IRELAND.

To the Editor of THE LANCET.

SIR,—With reference to the alarmist statement in the extract from THE LANCET which appeared in the *Irish Times* to-day—namely, that "the institution is left without scientific direction" by the resignation of the honorary medical staff, my letter which was published in the same issue will, I trust, show that the public need be under no apprehension on this point. So far from being left without scientific direction, the hospital is in charge of two resident medical officers and of a visiting physician of exceptional scientific and expert qualifications in the treatment of consumption, whose appointment has led to the present crisis.

I may point out that the resignation of the consultant physicians, though sincerely deplored by the board, does not in any way affect the "scientific direction" of the hospital, as these gentlemen have never taken an active part in the direction or management, save on the occasion of the meeting of May 26th, 1911, referred to in my letter above mentioned.—I am, Sir, yours faithfully,

JOHN R. ORPEN, Honorary Secretary.

South Frederick-street, Dublin, March 8th, 1913.

*** In the leading article in THE LANCET it was stated that the institution had two resident medical officers, and it was not suggested that these had resigned. We take this opportunity of correcting a slip which occurred in that article. In the fifth line from the bottom of the first column of p. 698 the words "only member" should have been "only medical member."—ED. L.

BRIGHTON AND HOVE HOSPITAL FOR WOMEN AND CHILDREN.—One of the oldest medical institutions in Brighton is the Brighton and Hove Hospital for Women and Children, which has carried on its work for a long time in West-street, Brighton. The necessity for larger premises has been much felt, and preparations have been going on with the object of building a new hospital on a site presented by Mr. S. Copestake in D'Avigdor-road, Hove. For various reasons this has not been proceeded with, and in the meantime other new proposals have been brought forward, and on Feb. 25th, at the annual meeting of the governors, the committee of management was empowered to purchase the grammar school premises in Buckingham-road, Brighton, which are becoming vacant in September, for the purposes of the hospital, and, with the permission of Mr. Copestake, to sell the land in D'Avigdor-road.

MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(*Continued from p. 722.*)

II.—THE BATTLE OF THE CLUBS AND THE ACT.

Medical Attendance for a Halfpenny per Week.

Gillingham, Kent.

GILLINGHAM, on the north-east side of Chatham, now a municipal borough and the largest town in the county of Kent, has a population of 52,000 persons, and is one of the storm centres under the Act. It is a favoured place in so far as the medical profession is not overcrowded and that some among the local practitioners are proven fighters. They fought with each other before there was any question of the Insurance Act, and, like good honest combatants, they are all to-day the best of friends with former adversaries. The exchange of hard blows seems to have engendered respect, and ancient foes are now marching in step against the Act. As I observed at Southampton, the Act has at any rate done much to unite the profession in aim and principle, though in the actual events before it came into working the bonds of union broke.

In Gillingham there is a medical benefit society which has been for a considerable time very objectionable to many of the medical profession in the place. It has organised contract work, not at 1*d.*, but at ½*d.* per week per member, and now hopes to do a great deal more contract work at ½*d.* because of the assistance rendered to the institution by the Medical Insurance Act. A medical practitioner was found to accept the post of medical officer to this Gillingham medical aid society. He started with 1000 ½*d.* subscribers. The head of the family and adult males in work pay 1*d.* per week; the women and children, who represent the majority, only pay ½*d.* There is a 3*d.* entrance fee, 1*d.* for the registration card, and minor charges, but the medical officer does not get the whole even of these small sums, as deductions are made for the cost of management. Practically, though the men pay 1*d.* per week, only ½*d.*, it seems to me, goes to the medical attendant. The late medical officer, being a man of ability and rare energy, raised the membership from about 1000 to 5600, so that a second medical officer had to be engaged, and soon they each had a population on their books of some 3000 members to attend. Among these there are, of course, the usual cases of abuse—publicans, prosperous tradesmen, shipwrights, and others who can well afford to pay the usual fees of general practitioners are receiving medical attendance for nominally ½*d.* a week. This is the old style of grievance which has so often been described under the title of the "Battle of the Clubs." If I give another such instance to-day it is because at Gillingham the impression prevails that this grievance, instead of being swept away by the National Insurance Act, is going to increase. Here, at any rate, it looks as if the abuse is re-established instead of being abolished by the Act, as we were all led to expect that it would be.

What Club Work Means.

A few details as to what work for such medical aid clubs means will serve as a useful warning both to communities and to medical men who are invited to undertake such responsibilities. The medical officer, whose energy and ability had made the success of the society, explained to me that, even after he had a colleague appointed and his list of subscribers was reduced to about 3000, he made up in normal times some 180 bottles of medicine per day, received about 50 calls, and paid at least 20 visits. But in times of epidemic influenza or measles the work was so utterly beyond the strength of the strongest of men that he had to invent all kinds of stratagems so as to hide himself and snatch a few hours' sleep without being disturbed by impatient "patients." And yet, in spite of this excess of work, he found the appointment did not pay. From the halfpennies the society deducted before distribution the rent of his house, and there remained, roughly speaking, £270 a year. Out of this £50 had to be paid to a dispenser and £50 for drugs, but the greatest burden was carriage hire, amounting to nearly £100 a year. Thus there remained barely more than £70 net profit. Nevertheless, he paid last year income-tax on £480, but it was made out of the extras, operations, midwifery charges, and, above all, out of the private practice. Thus this medical aid society was not only injuring the profession, as it seemed to me, by withdrawing from the field of medical practice hundreds of persons who could have well afforded to pay more than ½*d.* per week, some of whom should certainly have paid the ordinary fees for family medical attendance at various rates, but it enabled an imported doctor to compete effectively with the residential practitioners in the domain of private practice. There thus arose good cause for a mighty quarrel. Of course, the medical officers of the medical aid society were ostracised, none of the local practitioners would meet them or consult with them, and on one occasion, I am told, it was suggested that an appeal should be made to the General Medical Council. Evidence which appeared quite conclusive had been obtained showing that there were touting and canvassing, in which the medical officers themselves were doubtless not engaged, but in which none the less their names were used publicly as inducements to subscribe to the association. But while the necessary measures were taken to bring their offence home to the medical officers of the society, an urgency meeting of all the members was convoked. They decided to abolish their society altogether. Then they agreed to form a new society with a new name and promised that this new society should neither tout nor canvass. The proceedings against the society, or rather its medical officers, upon professional grounds were, therefore, discontinued.

The Process of "Sweating" Practitioners.

Thus matters stood till the Insurance Act revolutionised the situation. Not only the medical profession, but all those who have sufficient knowledge and concern about medical practice to resent the abuses which caused the battle of the clubs to be fought all over the country, will be surprised to hear that the society described above has been approved under the Insurance Act. The halo of Government sanction is bestowed on this Gillingham institution. Here we have a society which builds up its prosperity by grinding the face of its medical officers, not only obtaining the moral support of the authorities, but also receiving financial assistance from them. Many of its members are now insured persons. From those among them who used to pay 1*d.* the society withdrew ½*d.* as far as medical benefits were concerned, those in charge of the club only gave half the subscription to their medical officer. To-day, however, the society hopes to obtain all the money allowed for medical service—namely, the 6*s.* 6*d.* for medical attendance, the 6*d.* for sanatorium benefit, and the 1*s.* 6*d.* for dispensing. Yet out of this total of 8*s.* 6*d.* per annum the medical aid society imagines it may continue paying its medical officers only ½*d.* per week, that is, 2*s.* 2*d.* for the year. They used to sweat their medical officers to the extent of 50 per cent. Now they hope to sweat him to the amount of nearly 75 per cent. The conviction seems to exist among the organisers of this system that there is nothing in the Act stipulating how approved societies that organise their own medical service shall spend the money they receive so long as it is spent on medical treatment. Therefore, if a part of the money handed over to an approved society by the insurance authorities is spent in the medical treatment of uninsured women and children, it does not matter so long as the insured also get medical treatment. Here, then, was the basis of a good stroke of business—at the expense of the medical attendant of course. The main tradition of club practice for the last 30 years—before which time the existence of medical benevolence, and even great medical charity, was freely acknowledged—has been to rely for prosperity on the exploitation of the medical man. If the Act has been misinterpreted at Gillingham the matter is one which should immediately be set right before evil communications from Kent corrupt good manners, perhaps recently acquired, which are being displayed elsewhere.

How the Act may assist "Sweating."

Perhaps the Insurance Committee may say to such medical aid societies, when they hand over the 8*s.* 6*d.* for the insured members, that they must not sweat a profit out of it, but must give the entire 7*s.* to the medical attendant and the 1*s.* 6*d.* to the dispenser. Even if this is done it will not wholly relieve the situation. Instead of the sweating standing forth to be seen of all men naked and unashamed, the abuse may yet remain. When such societies strive to inveigle some unfortunate

medical practitioner to become their medical officer they will hold out as a golden promise the fact that a considerable number of their members are insured persons, and therefore their medical officers will receive 7*s.* a year for each. The Insurance Act, by enabling such societies to offer this advantage, arms them with the elements of a bargain. They are then more likely to wring from the weaker medical men some degrading form of submission and servitude. Already the idea is afloat that an arrangement could be made to pay medical officers only a farthing per week for some of the members. It is said that something of the sort has been done by a similar organisation in Reading, and it seems to me that the Gillingham society may aspire to the economic distinction of securing medical service for a farthing per week! Why pay more now that the National Insurance Act can be utilised as a decoy duck to rope in practitioners who may be placed in charge of an unlimited number of women and children for one farthing per week?

Revolt against the Club System and the Act.

The fact that the National Insurance Act thus seemed to favour the further exploitation of the club doctor has proved to be the breaking-point. The Gillingham Medical Aid Society told its medical officers to go on the panel, so that the society might receive 8*s.* 6*d.* for such of their members as were insured under the Act. Both the medical officers, to the credit alike of their heads and their hearts, refused to go on the panel for the benefit of their employers. They had been sweated too long. They repented and regretted their former submission; and, in spite of the risk and uncertainty before them, resigned their posts and joined the organised members of the medical profession. The medical aid society, thus stranded, hastened to import two other medical officers. A good deal of bitterness is felt against one of these new arrivals because he had signed a pledge not to accept any appointment which had been given up in defence of the interests of the profession. The names of these two imported practitioners are not inscribed upon the panel, but we have instead the name of the society which employs them. This society therefore appears on the panel as if it was a firm of medical practitioners, whereas it is an association of workmen, small tradesmen, and others who have banded themselves together so as to get cheap advice and medicine. It must be said, however, to the credit of at least a minority of the members of this society, that they do not all approve of what has been done. A considerable number of members have followed their former medical officer and are now his private patients.

Club Patient Preferred to the Insured Person.

The medical officer who had done so much to make the medical aid society a large and important body has now completely severed his connexion with this institution, but he is as firm against the panel, even when properly employed, as against medical aid societies. He believes that it pays better, as it is much more agreeable, to have private patients who contract directly with their medical attendant for medical service at 4*s.* 4*d.* than to attend insured persons at 7*s.* per annum. The former are aware that they are paying very little, and many of them are grateful for what attention and medicine they receive. But the insured person has much more exalted pretensions. He looks upon himself as a sort of State institution. He comes, not with a penny, but with an Act of Parliament, in his pocket. Then he is under the impression that the panel doctor is well paid, so he expects a much longer interview and more attention. In this way, many an insurance patient at 7*s.* may be less remunerative than a club patient at 4*s.* 4*d.*, and unless the Act is stiffened in some direction, or public feeling grows more enlightened than it is in Gillingham, abuses will be perpetuated. It may be said that some of the insurance patients have never been club patients—that many of them belong to a better class. This, however, is scarcely a recommendation. At Gillingham, in any case, the richer the member of the medical aid society the more he expects. He paid like a poor man, but under the Act he has displayed all the exigencies of a rich man. More than one practitioner at Gillingham insisted to me that the 7*s.*, in the circumstances, was not an improvement on the 4*s.* 4*d.* formerly paid. The expectations of the patients were far in excess of the increase in the pay, and thus they resembled the few rich people on the medical aid societies. But if the insured person is a source of frequent disappointment to the panel doctor, the former is also far from satisfied with the medical treatment he is receiving. The most unanimous cause of complaint is the loss of time, and occasionally the loss of dignity, arising from the prescription system. Formerly the patient went to his club doctor and came away with his bottle of medicine. Now he only receives a prescription, and it is often more trouble to get it made up than to get medical advice. In any case it is a double sacrifice of time. Then many druggists have not yet stocked all that is needed. After waiting a long time, the insured person gets a bottle of medicine that is not wrapped up in a piece of paper, and the State patient expects to get all the paper, string, or wax that may be going. At Gillingham a good many insured persons complained that they had been treated by the druggists "like parish patients." So much dissatisfaction is rife that when the medical officers left the medical aid society they were followed by a large percentage of their old patients, even though a number of them were insured persons. They preferred to pay rather than go to the panel doctors—that is, to the newly imported club doctors who had consented to become panel doctors.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool University Association: Dinner to Sir William Ramsay; Plea for Enlarged Laboratories.

THE remarkable growth of the chemical department of the University of Liverpool and the urgent need for additional accommodation were emphasised at a dinner given to Sir William Ramsay by the Liverpool University Association, at the Exchange Station Hotel, on March 10th. Mr. J. W. Alsop, the president of the University Council, was in the chair. In proposing the health of "Our Guest," he said that Sir William Ramsay was eminent not only as a great chemist but as a great teacher of chemistry. In Liverpool it was recognised what a friend Sir William Ramsay had been to chemical science in general and to Liverpool University in particular. When University College, Liverpool, came into being, only one chair of chemistry was founded in Liverpool. Later a lectureship in organic chemistry was founded, and some years afterwards the chair of bio-chemistry was founded, followed by the establishment of the chair of physical and electro-chemistry. The original laboratories had been greatly extended by the munificence of the late Mr. Gossage, the late Mr. Sutton Timmis, and Dr. Muspratt. The chemical department had now outgrown its clothes and wanted a larger suit. Sir William Ramsay, in acknowledging the toast, said his first association with the University of Liverpool was in the early "nineties," when he was examiner in chemistry. Those were three-legged days, when Liverpool, Manchester, and Leeds were united in Victoria University. Like other organisms, they had propagated by fissure, and the result had been equally beneficial to all three. The progress of Liverpool University in the last few years had been phenomenal, and the chemical department had grown so rapidly that, in spite of the extensions which had taken place, a great many students had to be rejected for want of room. There were two students to a bench now, and although it was possible to exist in such circumstances, it was not easy to progress. Good work was sometimes done in crowded conditions and with insufficient appliances, for the deficiencies rather stimulated the inventive faculties, but on the whole it was better to give the students convenience and room to work in than to confine them to cramped quarters. At the top of the existing chemical department there were a large number of small, low rooms which could only be used for the storage of apparatus not in use. By the raising of the roof large and commodious rooms could be there provided capable of accommodating 50 or 60 students. That would meet the needs of the immediate future, and enable considerable advance to be made. The cost of the additional accommodation needed was not great; £10,000 would cover it, he believed, and Liverpool's citizens had been so generous to the University in the past that one could be certain they would not fail it in the future. Chemistry was every day coming to bear more and more upon the comforts of everyday life. In Holland it had recently been discovered that bread could be kept fresh in two

ways: by freezing it or by keeping it hot. This discovery had made a revolution in the Dutch bread trade and might be of enormous value in the avoidance of strikes. Professor Fischer, of Berlin, having discovered how to make artificial sugar and artificial caffeine, was now turning his attention to albuminoids, and no doubt would, in due course, discover artificial milk. Conceivably, in the course of time, it would be possible to produce food artificially, but perhaps by that time the economic question would turn up, and they would have to decide whether it was cheaper to grow food naturally or produce it out of, say, coal tar. Sir William Ramsay emphasised the value of the association of research work with instructional work, and said that unless a professor was constantly occupied with the enlargement of the bounds of knowledge his pupils would lose interest in their work. In Germany it had been found that the beginnings of discoveries came not so much from the technical schools as from the universities, inasmuch as in the universities the teachers had a freer hand, whereas in the technical schools they always had to consider the immediate practical bearing of things. In England it had been hit off very fortunately by combining the two functions, and having chairs of applied science in the universities. The toast of "The University School of Chemistry" was responded to by Professor Baly and Professor Donnan.

Liverpool Corporation and Compulsory Detention of Tuberculous Persons: Sanatoriums for Cheshire.

At a meeting of the Liverpool Insurance Committee held on March 7th the difficulties of dealing with insured and other persons who discharge themselves from hospitals while in an advanced stage of phthisis or other disease, and have no suitable homes to go to, were discussed. It was pointed out by Dr. E. W. Hope (the medical officer of health) that the resources of the Insurance Committee and his staff were strained to the utmost to provide those persons with nourishment and nursing. They wandered from one lodging-house to another while in advanced stages of consumption or some other disease, and were a danger to the community. The corporation were seeking powers to prevent such persons and the aged and friendless leaving hospital.—The Cheshire Health Committee at a meeting held on March 6th decided to proceed with a scheme for the provision of sanatoriums. The county council has had before it a proposal to unite with several county boroughs, and a joint scheme has now been agreed on. Suitable sites in the county will be selected. At present Cheshire is sending tuberculous patients to sanatoriums in other parts of the country.

Death of Dr. John Bligh.

Dr. John Bligh, one of the oldest medical practitioners in the city, died on March 8th after a short illness. Dr. Bligh, who was in his 73rd year, was born at Castlehackett, Ireland, and was educated at Queen's College, Galway. Amongst his fellow students were Lord MacDonnell, Lord Atkinson, Sir Andrew Reed, late inspector-general of the Royal Irish Constabulary, the late Sir William Thompson, and Mr. T. P. O'Connor, M.P. Dr. Bligh graduated as M.D. and M.Ch. of the Queen's University of Ireland, in 1865, and was the first recipient of the latter degree. Dr. Bligh was a great lover of music, and the leading members of operatic companies were always welcome guests at his house. He was a man of warm sympathies, and was ever ready to help a struggling practitioner. He was a justice of the peace for the city, but for many years took no active part in politics. Dr. Bligh leaves a widow, two sons, and a daughter.

March 11th.

BRISTOL AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

University of Bristol.

THE interim report of the Colston Research Fund shows that a number of important investigations have been carried out during the past year. A highly sensitive pressure gauge has been constructed; soap solutions are being investigated; certain of the problems connected with cheese-making are being inquired into; the course of the muscle-sense fibres of the nerves supplying the muscles of the jaw has been fully worked out; more time has been spent in trying, not unsuccessfully, to cure a typhoid carrier; and other matters are still under investigation. The late Mr. Augustus Nash has bequeathed a sum of about £18,000 to the University for the advancement of the study of the natural sciences, especially chemistry. It has been resolved to establish a superannuation scheme for the benefit of the teaching and administrative staff, to which the Board of Education promises an annual contribution of £450.

Bristol Royal Infirmary.

At the annual meeting of this institution it was stated that the number of patients treated during the past year, inclusive of those under treatment at the end of 1911 and carried over to 1912, was 63,972—5049 in-patients and 58,923 out-patients. The financial side was said to be gratifying; the actual totals of ordinary income and expenditure were not stated, but the deficit on the year was between £4000 and £5000. Surprise and regret were expressed at a falling-off in the workpeople's contributions; other subscriptions showed an increase. The committee does not contemplate immediate legislation to restrict abuse of the institution by insured persons, and it appeals for an increased subscription list, which is especially necessary in view of the fact that investments had been largely sold to meet the cost of recent extensions.

Bristol General Hospital.

The annual meeting of this institution was presided over by the Lord Mayor of Bristol, Alderman C. J. Lowe, who complimented the committee on the vigorous spirit of progress manifested by the hospital. The report showed an increase of 53 in the number of in-patients, bringing the total to the record figure of 2840. The daily average of occupied beds was 180, or 90 per cent. of the whole. The out-patient total, on the other hand, fell by over 2000, a fact at which the committee expresses satisfaction. The total ordinary income was £11,608, and expenditure £15,965; this large deficit is happily covered almost fully by legacies, but a balance of over £4000 is due to the treasurer. It is satisfactory, however, to find that a sum of about £4000 has been added to investments. The new wing is being built, and an important addition to the pathological department is under consideration. Mr. Herbert M. Baker, chairman of committee, after referring to the recent illness of the president, Mr. Storrs Fry, appealed to the public for increased support, pointing out that such restrictions on the use of the hospital by insured persons as it had been found necessary to enact would relieve the burden of expenditure by only a small fraction.

Bristol Children's Hospital.

The Lord Mayor also presided at the annual meeting of this institution. The report stated that the number of out-patients during 1912 had been 4937 and the number of in-patients 818. The year's income was £4600, and the balance due to the treasurers has risen to £361. It was pointed out that the public had no excuse for diminishing its subscriptions to this institution on the ground that the Insurance Act relieved the hospital of part of its work, for the diminution in the number of patients treated would be fractional.

Bristol Insurance Committee.

Several points of medical interest were raised at a recent meeting of this body. A feeling was expressed that the number of patients taken by a panel doctor should be restricted to 2000; and the committee also spoke of appealing to the Chancellor of the Exchequer to allow domiciliary treatment of insured persons suffering from tuberculosis to be paid for by the visit, as during the end of 1912, and not by a capitation fee of 6*d*., since the former was the more economical plan.

Dinner to Mr. J. Paul Bush.

Mr. J. Paul Bush was entertained at dinner by his former residents and dressers on the occasion of his retirement from his surgeonship to the Royal Infirmary and the clinical staff of the University of Bristol, and a handsome piece of plate was presented to him. His place as surgeon to the Royal Infirmary has been filled by the promotion of Mr. E. H. E. Stack, who has been a member of the assistant staff for some time. Mr. A. Rendle Short, surgical registrar to the infirmary and a distinguished student of the Bristol school, replaces Mr. Stack on the assistant staff.

Vaccination and the Bristol Board of Guardians.

During the first six months of 1912 3872 births were

registered, and of this number 1373 were successfully vaccinated and 971 had certificates of conscientious objections granted. These certificates are still being granted in increasing numbers. During 1912 they numbered 1969, and in January of this year the number of children successfully vaccinated amounted to 191, while the certificates of conscientious objection were 194.

Health of Lynton.

The medical officer of health of Lynton (Devon), Dr. H. J. Edwards, in his annual report urges the urban council to make increased provision of dwellings for the working classes. There was an unusually heavy rainfall in Lynton during 1912—viz., 59·67 inches.

The Local Government Board Inspector and the Housing Conditions of Holsworthy.

Dr. T. Carnwath, Local Government Board Inspector, has reported to the Holsworthy (Devon) rural council on the housing conditions of its area. Dr. Carnwath states that he has rarely been in a district where the housing conditions are so bad and the domestic conveniences so few. He has made a detailed examination of about 170 houses, and would like to condemn the whole of them, but, adopting a practicable standard, he says that out of the 170 houses 86 are unfit for habitation. It is to be hoped that now the Holsworthy rural council will take prompt steps for improving the housing accommodation in its district.

West Cornwall Infirmary, Penzance.

Sir Clifford Cory, M.P., has given £100 towards defraying the deficit of £232 which existed against the West Cornwall Infirmary at the close of 1912. He has also sent to Mr. R. C. Lawry, as secretary of the honorary medical staff, a similar sum of money to be used for purchasing instruments for the operating theatre.

March 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Medical Inspection in Scottish Schools.

A FIRST report on the medical inspection of school children in Scotland has recently been issued, compiled by Dr. W. Leslie Mackenzie, medical member of the Local Government Board. It is based on the reports of school medical officers for the year ending July, 1912. In this volume it is stated that attention has been concentrated upon the larger aspects of medical inspection, the history and organisation of the movement, the sanitation of the schools, the personal hygiene of the children, and the general results in town and country, while but little space had been allocated to the discussion of purely statistical material, which, though of course very important, is not alone sufficient to form the groundwork of general conclusions. The report is divided into 13 chapters with appendices, occupying altogether about 100 pages, and consists largely of extracts from the individual reports of school medical officers. In a concluding chapter, Dr. Mackenzie says that the forecast based on the trial investigations ordered in 1902 by the Royal Commission on Physical Training (Scotland) has been more than justified. Under every heading of the elaborate schedule medical inspection has revealed considerable percentages of actual disease; moreover, it has shown that, literally in thousands of cases, diseased conditions have been allowed to develop, which, taken in the earlier stages, could perfectly easily have been prevented; that thousands upon thousands of minor ailments, obstructive to education, are not considered worth the attention of the doctor, and that in many cases these conditions interfere not only with the education of the children but also with their efficacy as citizens in later life.

The Treatment of the Inspected Children.

The report emphasises the fact that medical inspection has everywhere stimulated the ordinary medical resources of the community in the departments of institutions and in the visitant nursing services. As to what line the organisation of treatment should take, it is pointed out that already the city school boards and the county education committees have in many localities instituted a service of nurses. These are engaged in following up the cases discovered at the regular inspection. This "following up" consists, as a rule, in visiting the homes of the children, in advising the parents to submit the patient to a doctor, in directing them how to carry out the prescribed treatment, and in keeping up the proper connexion between the school and the home. It is extremely satisfactory to read, in report after report, what a large proportion of cases to which attention has in this way been directed have ultimately been properly attended to medically and cured. It is unfortunate that so many special defects or diseases known to require specialised treatment cannot at present obtain this, either because the requisite medical service is out of reach or because the parents are too poor. It is therefore apparent that new organisation is in many directions urgently required. Attention is called to the importance of "school clinics." In several of the individual reports it is stated the medical officers, finding that the ordinary medical resources are insufficient, suggest the institution of clinics of this sort, particularly in the country districts, where medical institutions are few and far between.

Physical Training and the Teaching of Hygiene.

After dealing with the sanitation of the school and the principal diseases, the report goes on to say how physical education has grown in importance ever since the report of the Royal Commission. The tendency to look upon physical education as a subject "by itself" is, perhaps, natural to the "time-table" mind, but there are some indications that a more rational conception of the relation of physical training to the promotion of health is gaining ground. The fact that the department has now appointed a medical specialist as chief of the inspectorial staff for physical education is in itself a proof that henceforward physical education will take its true place as at once an instrument in the promotion of personal health and in laying the foundations of physical vigour. One of the most satisfactory features of the report, it is claimed, is the indication that the teaching of the importance of personal hygiene is going on apace. This might be illustrated from several of the reports, but perhaps the most striking work has been attempted in Glasgow and Govan. Among the teachers, too, the interest in hygienic teaching has been seriously stirred, and the necessary "instructions" issued broadcast to the parents have in themselves had a very important educational effect.

Diet of the Working Classes in Glasgow.

A report upon a study of the diet of the labouring classes in the city of Glasgow has been prepared by Miss Dorothy E. Lindsay, B.Sc., a Carnegie Research Fellow. The investigation was rendered possible by coöperation between the city corporation, the University, and the Carnegie Trust. The primary object of the investigation was to ascertain the diet obtained by the poorer labouring classes in Glasgow, but since Glasgow afforded the possibility of studying families of different nationalities of similar social conditions, some observations were made in Jewish and Italian households. The Jewish were all "kosher" families, and their food was prepared in the Jewish fashion. The Italian families neither lived in such a distinctively national way, nor did they preserve the racial character of the diet as did the Jews. For purposes of investigation the Scotch households were divided into eight groups, according to the amount of income and the regularity with which money was earned. In a general summary of Miss Lindsay's results the average daily energy value of the diet in all the groups into which the households were divided was 3163 calories per man. The principal foodstuffs used were bread, potatoes, milk, sugar, beef, and vegetables. The cheaper and vegetable foods, oatmeal, peas, &c., were used in relatively small amounts. Of the families whose weekly income was over 20*s.*, 28·5 per cent. had a diet the energy value of which was less than the minimum of 3000 calories. Of the families whose weekly income was under 20*s.*, or irregular, 62·5 per cent. had a diet the energy value of which was under 3000 calories. Not one of the families in which the wage was regular and below 20*s.* reached the minimum of 3000 calories. The figures showed that while the labouring classes with a regular income of over 20*s.* a week generally managed to secure a diet approaching the proper standard for active life, those with a smaller income, and those with an irregular income, entirely failed to get a supply of food sufficient for the proper development and growth of the

body or for the maintenance of a capacity for active work. Oatmeal was used in 46 out of 60 families, but the average amount per man per day was less than one ounce.

Death of Dr. Alexander Solanders, of Nairn.

The death of Dr. Sclanders, medical officer of health for the burgh of Nairn, took place, after a long illness, at his residence, Nairn, on the morning of March 2nd, at the age of 80 years. Dr. Sclanders graduated M.A. at Aberdeen University and took his medical degree in Edinburgh. Afterwards he became a house surgeon in the Edinburgh Royal Infirmary, and was subsequently appointed assistant to Professor Simpson, which position he held for three years, frequently sharing with him the responsibility of important cases. He was reluctantly compelled on account of his health to leave Edinburgh, and more than half a century ago he started practice in Nairn, soon becoming popular with all classes of the community. Soon after he came to Nairn he was appointed medical officer for the burgh, an office which he held until last week, when he resigned it. He gave much attention to sanitary matters, and the town of Nairn has to thank him to a large extent for its healthy condition. For many years he took an active interest in the town and county hospital, and was for some time an enthusiastic volunteer. His great hobby in life was gardening. His funeral was accorded military honours.

Aberdeen Friendly Societies and the Doctors.

A special meeting of the Aberdeen and District Friendly Societies' council was held on March 5th, when a letter from the secretary of the Local Medical Committee was read regarding the decisions come to by that Committee on certain questions referred to it from the conference with the representatives of the Friendly Societies held on Jan. 20th. 1. With regard to attendance on present old and disabled members of Friendly Societies, the Local Medical Committee recommend to the members of the profession that medical attendance be given to such at the rate of 6*s.* per annum per member, the societies to be responsible for the sum, and free choice of doctor to be permitted to the members. The Local Medical Committee also desire in doing so that the Friendly Societies will recognise and acknowledge that this is a concession made by the profession in view of the circumstances placed before them, and is to establish no precedent at any future date. Also that attendance on other uninsured and non-insurable members under the local income limit be at the rate of 7*s.* per annum, according to agreement under the National Insurance Act. 2. With regard to attendance on members of juvenile lodges, the Local Medical Committee recommend that attendance on present members of juvenile lodges be agreed to at the rate of 1*s.* 6*d.* per visit, messages to be sent requiring such visit before 10 A.M. Visits between 8 P.M. and 8 A.M. to be at the rate of 3*s.* Free choice of doctor to be allowed. Ultimately, after a lengthy discussion, it was agreed that the committee should approach the Local Medical Committee and offer them the following terms: 3*s.* 6*d.* per annum per member for old and disabled members, 4*s.* 6*d.* per annum per member for other uninsured and non-insurable members, 2*s.* 6*d.* per annum for juveniles, cost of health certificate 1*s.* 6*d.* Subsequently two members of the committee withdrew from it on the plea that, having been already before the doctors and refused, the offered terms would not be accepted. Finally, the committee was instructed to offer the doctors the terms mentioned, and, failing agreement on such lines, to make the best terms possible.

March 11th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal National Hospital for Consumption.

AT a joint meeting of the Fellows of the Royal Colleges of Physicians and Surgeons, which was held at the Royal College of Physicians, Dublin, on March 11th, the action of the board of the Royal National Hospital for Consumption for Ireland and the consequent resignation of its visiting medical staff were considered. The correspondence between the lay board and the medical staff was read, and a resolution was passed unanimously endorsing the consulting and visiting staff of the hospital in the action which they had taken, and which was described in THE LANCET in a leading article last week.

The Medical Benefit Committee.

The Treasury Committee appointed to conduct an inquiry into the question of extending the medical benefit of the Insurance Act to Ireland held sittings last week in Belfast, Dublin, and Cork. Three witnesses were heard on behalf of the profession, Mr. R. J. Johnstone in Belfast, Mr. Maurice R. J. Hayes in Dublin, and Mr. Philip G. Lee in Cork. Mr. Johnstone explained to the Committee the revolution in medical practice which the medical benefit would bring about in Ireland. He declared that, if the drawbacks were obviated, the profession would be willing to work the benefit, but worse conditions should not be offered to Irish medical men than were given in England. Mr. Hayes, developing the same point, declared that there was a grave anxiety that the Commissioners were attempting to obtain cheaper rates for medical services in Ireland than in Great Britain, as was evidenced in the case of the maternity and the sanatorium benefits. The Commissioners suggested in Ireland a confinement fee half that paid in Wales, and they proposed earmarking 4½*d.* instead of 6*d.* for domiciliary treatment under the sanatorium benefit. He further made it clear that the profession in Ireland had not declared either for or against the extension of the medical benefit to Ireland; they would consider any scheme on its merits. He suggested that the same remuneration as was given in England—viz., 7*s.* a head—would be accepted in Ireland. If the families were to be included in the benefit, then a fair rate for persons with families would be 1 guinea a head. He pressed also that medical benefits in all cases should be administered through the Insurance Committees and not through the Friendly Societies, and the medical profession should have a direct representation of 1 in 10 on such committees. If medical benefits were extended to Ireland there must be free choice of doctor by patient and of patient by doctor. Medical benefits should be extended only to insured persons having an income of less than £2 per week. Mr. Lee, who gave evidence at Cork on behalf of the Joint Medical Committee, stated that he considered 8*s.* per insured member and £1 for the member and his dependents would be a fair rate. He said the medical profession in Ireland were not so concerned about the actual money payment as they were about the huge extension of the contract system which too often will impair medical efficiency by not giving time to overworked practitioners to make accurate diagnoses. I may mention that the amount of evidence to be tendered was limited by the Commissioners. That, taken in connexion with observations dropped by individual Commissioners, has left the impression that many of the members started with preconceived opinions and that the introduction of medical benefits for at least some of the towns is already a foregone conclusion. Among the non-medical witnesses there was much difference of opinion as to the desirability of extending the benefit to Ireland. Speaking generally, the representatives of the societies were in favour of the proposal, and those of the employers against it. An interim report from the Committee is expected in a few days. So far as the inquiry has gone, it is regarded by many medical men as little short of a farce. The refusal to hear medical evidence from Belfast was inexplicable; indeed, the whole attitude of the members of the Committee was in the direction that the medical profession had quite a secondary interest in the question as compared with insured people and employers. Then attacks were made on the medical profession in Londonderry, and yet when at Belfast Dr. George Elliott rose to reply and to explain he was promptly silenced by the chairman. As to remuneration, the main idea of the Committee seemed to be to pay 4*s.* a year per head for medical attendance upon an insured person, with medicine, and 8*s.* for the insured person and dependents—that is, for the whole family. No wonder that in an editorial in one of the leading Belfast daily papers the question is asked, "What sort of doctoring could be given for such remuneration?"

Maternity Benefit in Ireland.

A conference was held recently at the offices of the Insurance Commission in Dublin between the representatives of the Dublin maternity hospitals and representatives of the Union of Approved Societies, at which the position of the

hospitals in relation to the maternity benefit was fully discussed, and the following four points were eventually agreed upon—viz.: (1) a fee of 5*s.* to be fixed for intern and extern patients; (2) the fee to be reconsidered at the end of one year should the hospitals be able to prove that they had actually incurred loss as the result of the withdrawal of subscriptions; (3) the Approved Societies to pay the fee direct to the hospitals; and (4) the hospitals to provide the certificates required by the Approved Societies in connexion with the payment of the benefit. For this purpose it is proposed to furnish each hospital with a supply of forms, and it has been decided that the certificates may be signed by any responsible member of the hospital staff—for instance, the medical officer, matron, or the nurse in attendance upon the case. It is considered strange that although there are maternity hospitals in Belfast, Cork, and Limerick, their representatives were not consulted in reference to the above regulations. Indeed, nothing is more remarkable than the way the Irish Insurance Commissioners are—off their own bat—making arrangements of which the Advisory Committee and the medical profession know nothing beforehand.

Typhoid Fever and Diphtheria in Belfast.

In a report presented at the monthly meeting of the Belfast city corporation, dealing with the health of that city between Jan. 19th and Feb. 15th, the medical officer of health drew attention to the increase in the number of cases of typhoid fever and diphtheria (16 of the former and 37 of the latter having been notified during the month, as against 7 and 26 in the preceding month, and 7 and 18 in the corresponding month of 1912). No common cause (water, milk, typhoid-carriers, shell-fish) has been discovered for this increase; the typhoid cases have appeared sporadically, and no contact seems to have occurred amongst the families of the several patients. Practically all the cases were found in the houses of the working class, the majority being in poor circumstances; and the houses, with one exception, were in a clean and sanitary condition.

Death of Mr. Joseph Bradley.

I regret to announce the death of Mr. Joseph Bradley, L.R.C.P. & S. Irel., at the Tyrone County Hospital on March 8th, from complications following an operation for suppurative appendicitis. He was dispensary medical officer of the Gortin district of the Omagh Union, and had only recently been married; indeed, three weeks ago the people in the Gortin district—where he practised—showed their appreciation of his services by making him a handsome presentation on the occasion of his marriage. To his young widow the greatest sympathy is extended. Mr. Bradley acted for a time as assistant demonstrator of anatomy at Queen's College, Cork.

March 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Cocaine Sellers.

A MONTH ago the Commissary of Police of the Quarter of the Sorbonne, in which the Paris schools are situated, was ordered to hold an inquiry on the clandestine traffic in poisons. The police sought for long in vain to trace whence the habitués were able to procure the drugs. An inspector finally noticed the movements of a woman who in a night café delivered to certain known persons little white paper envelopes containing several grammes of cocaine. Three days in succession she returned to the same establishment, then she disappeared, to be observed in another café, where she acted as before. She was followed, and was seen to talk to individuals who, in their turn, were shadowed. These persons also frequented certain night cafés, and with great secrecy and caution distributed little blue packages. The inspector gradually satisfied himself that he had to do with a band of purveyors of the drug in the students' quarter. Five arrests were made. A porter of a night café was found to be furnishing his accomplices with the drug, which he obtained by means of thefts practised by him in the pharmacies where he was also employed. The members of the band supplied the cocaine only to persons known to them and whom they found in the night cafés. A special introduction was necessary to enable any one to obtain a drug packet. They frequently changed their establishments and made themselves up, the men changing the cut of their beards and frequently varying their attire. They sold the cocaine as high as 20 francs a gramme. According to the results of the inquiry their *clientèle* was very large, and included students of the École Polytechnique and of all the faculties, among them many women.

The Jubilee of Professor J. Renaut.

On Feb. 22nd, at Lyons, the friends, colleagues, and pupils of Professor Renaut presented him with a medal commemorating his 40 years of teaching. A native of Touraine, Renaut began his medical studies at Tours, coming later to Paris, where he entered at the Charité. He took a medal in 1874 for his M.D. thesis on an anatomical and clinical study of erysipelas and the œdemas of the skin. Shortly afterwards he became chief of the medical clinic, and in 1875 director of the clinical laboratories at the Charité. He continued his researches at the Collège de France. On the creation of the Faculty of Lyons in 1877, Renaut was appointed professor of general anatomy and histology. From the first he achieved a rare success as a teacher. Subsequently as a hospital physician he established a clinical course which was always well attended. He became a member of the Academy of Medicine while very young, and was elected a corresponding member of the Academy of Sciences. He remained at Lyons, in spite of tempting offers of more coveted and highly placed posts. He is a poet also, and has published a volume of fine poetry, and is a remarkable artist, all the figures in his Traité d'Histologie being designed by himself, as well as the plates in a volume on the Art of Heraldry, of which he is the author.

The Three Years' Military Service and Medical Students.

The committee of the Association Corporative des Étudiants en Médecine has passed a resolution to the effect that, in view of the proposed new law increasing the period of compulsory military service from two to three years, very heavy burdens will be imposed on French students which foreign ones are not called on to bear, and urging that the time has come to settle the constantly recurring question of foreign students and to prohibit to them the practice of medicine in France. The law must not be permitted to exercise a discrimination in favour of foreigners. It is necessary also to examine closely into the probable consequences of this law from the standpoint even of French medical students.

Cerebro-spinal Meningitis.

An outbreak of cerebro-spinal meningitis has occurred lately at the Military School of Gymnastics at St. Maur. So far two cases have occurred. The military authorities have taken all the usual precautions. It is thought that these cases are sporadic. A case has also occurred in the 13th Regiment of Artillery in garrison at Vincennes.

Creation of a New Professorial Chair.

On the proposition of M. Landouzy, *doyen* of the Faculty of Medicine of Paris, the Council of the Faculty has unanimously voted, after discussion, in favour of the creation of a chair of hygiene of infancy, with a clinic. This chair would prove of undoubted utility, as Professor Hutinel remarked. It remains to find the money necessary for its establishment.

The Rational Treatment of Habitual Constipation.

The part played by respiratory gymnastics in the treatment of habitual constipation was considered by M. Froussard on Feb. 27th at the Société de l'Internat des Hôpitaux de Paris. For some years past kinesitherapy has held an important place in such treatment; and naturally so, since it is logical to remedy the impotence of the abdominal muscles. Of these the diaphragm is one of the most important, although it is usually regarded as a respiratory muscle, without regard to its abdominal rôle. Its movements in unison with those of the muscles of the anterolateral walls act not only on the visceral mass, promoting movement of the intestinal coils on one another, but also on the intestinal gases. The contractions of the abdominal walls subject the gases to alternate compression and decompression, thus forcing them to pass along the intestinal tract in a regular manner. This gaseous circulation awakens and maintains intestinal peristalsis. In defæcation the importance of the functional

integrity of the diaphragm need not be insisted on, as the part played by it therein is better realised. If atony of the antero-lateral abdominal walls can be remedied, where necessary, by surgical or prosthetic measures in certain cases, only respiratory gymnastics are available to combat diaphragmatic insufficiency. Such exercises, therefore, must take an important place in the kinesitherapy of habitual constipation. The treatment should be given shortly before the hour for going to stool. Nothing is more useful to excite the need of defæcation than respiratory movements pushed to the maximum, intermittently with movements of urging and Chilaiditi's manœuvre. This author, moreover, as well as Aubourg and Rosenthal, especially recommends respiratory gymnastics in this treatment.

The Establishment of Seaside Sanatoriums for Adolescents.

M. Kirmisson drew the attention of the Academy of Medicine on March 4th to the unfortunate position of young folks from 15 to 20 years of age who, having passed the age of admission to the French maritime hospitals of Berck or Hendaye, were unable to be cared for at any hospital of this nature when presenting themselves either with rhachitic deformities or tuberculous disease of the bones or joints. Moreover, these young persons could not be admitted to the hospitals for adults, which, indeed, they would overrun, and where they would not find the hygienic conditions that their state needed. Further, they often have open tuberculous lesions which are a source of danger to their neighbours. Seaside sanatoriums, therefore, are necessary, where such patients affected with bone and joint diseases, which at this age lend themselves well to conservative treatment, can be advantageously cared for.

A Post-graduate Course in Ophthalmology.

A two months' post-graduate course in clinical ophthalmology, under the direction of Professor Lapersonne, will be held, commencing April 1st, at the Hôtel Dieu and at the Faculty of Medicine of the University of Paris. The course, which is for intending specialists, will be strictly a technical course, and all its members will take part in the practical work. A diploma will be awarded at the end of the course. The instructors will be Professor Lapersonne (ophthalmic surgery), Professor Weiss (ophthalmometry), Professor *agrégé* Terrien (relations of ophthalmology with general diseases), Dr. Bourdier (bacteriology and pathological anatomy), Dr. Chenet (minor ophthalmic surgery), Dr. Velter (ophthalmic neurology), and M. Gellé (oto-rhinological examination). Foreign as well as French doctors will be admitted to the course. The fees, which are 100 francs, can be paid and receipts obtained at the secretariat of the Faculty (Wicket No. 3) on Tuesdays, Thursdays, and Saturdays, from noon to 3 P.M.

March 10th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The New Pharmacies Act in Italy.

AFTER considerable opposition the new Pharmacies Act has been approved by the Chamber. The Prime Minister, Signor Giolitti, took the Bill under his personal charge and so ensured its ultimate approval. At first sight it seems to mark a retrograde step; it limits strictly the number of pharmacies and will eventually make a State service of them. One pharmacy is to be allowed for every 5000 inhabitants, and such pharmacies can only be opened by decree of the prefect on the recommendation of the public health board of the province. For the right to open a pharmacy the chemist must pay a royalty varying from £6 in the small villages to £240 in the large towns, but he acquires no disposing right in the property, which on his death or retirement reverts to the Government, and is again to be acquired on a similar payment by the successful candidate in public competition. In this competition none are allowed to take part but Italian citizens, duly qualified as chemists and able to show that they possess sufficient means to carry on the pharmacy. This will mean the eventual closure of all foreign pharmacies, which, however, are allowed a period of 20 years' grace. It will also mean a large decrease in the number of students in the schools of pharmacy. To this objection, in the course of the debate, a member replied that the passing of the dispensing chemist was a matter of no moment, as nowadays there were no prescriptions to make up; the work of the chemist consisted in the distribution of proprietary preparations, and could be performed equally well by any shopman. The assertion is hardly an exaggeration. The origin of the Bill requires a little explanation. Before the unification of Italy different systems were adopted in the different States for dealing with the question of the pharmacies. In Tuscany and Emilia the calling was free; in the Papal States the number of pharmacies was limited, the concessions were paid for, and special privileges, such as the right to be the sole pharmacy in a certain area, could be obtained. The anomalies resulting from this state of things were put up with until 1888, when a law was passed making the profession a free one all over the kingdom, when the privileged pharmacies should have been compensated for the extinction of their concessions. This was to be done within five years. Unfortunately, it proved difficult to find the money for this purpose, and nothing was done in the way of compensation. Legally this annulled the Bill of 1888, but practically no notice was taken of the failure to pay, and numbers of new pharmacies were opened. The freedom of the calling, however, did not produce the results hoped for by the Government. The cities were filled with chemists, but the number of country districts without pharmacies rose from 3587 in 1887 to 3722 in 1907. The new law provides out of the payment for concessions financial assistance for the pharmacies in poor communities, and encourages the communal authorities to open pharmacies for themselves. A number of the more recently opened pharmacies will be closed if illegally opened according to the law existing prior to 1888. No fresh pharmacies can be opened without authorisation of the prefect. The privileged pharmacies will lose their position after a certain number of years and will become the property of the State. Without the payment of any compensation the law will be unified and the State will acquire absolute control over the pharmacies of the whole kingdom.

Death of Mr. E. H. van Someren.

Mr. van Someren, who died at Syracuse on Feb. 3rd after a few days' illness, was a well-known English practitioner in Venice, where he had been established since 1898. His paper, entitled "Was Luigi Cornaro Right?" published in THE LANCET in 1901, attracted a good deal of attention. He was an ardent apostle of "Fletcherism," or prolonged insalivation, and wrote other papers on this subject. Mr. van Someren was a man of strong conviction and obvious sincerity, with a personal charm that removed any bitterness from controversy. He leaves in Italy, in England, and in America a wide circle of friends whose sympathy goes to his widow and four young children.

Feb. 28th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Experiences of Austrian Surgeons in the Balkan War.

AFTER the return of the majority of the Austrian surgeons who had been sent by the Austrian Red Cross Society to the seat of war, a special meeting of the Vienna Gesellschaft der Aerzte was arranged in which these gentlemen could detail their experiences, and many of the narratives were very interesting. Dr. Steiner and Dr. von Schrötter, who had worked in Montenegro, said that hardly any sanitary preparations had been made in that country. Numbers of wounded soldiers were brought in or walked unaided to the emergency surgical office in Podgorica. Some of them had no dressings at all, but some had used first-aid packages with fair results. These packages contained two compresses, a safety-pin, and a roller bandage, all dressings being soaked in a solution of corrosive sublimate. Only the latest additions of this kind of outfit were, however, sterilised. The surgeons generally had to apply dry dressings. Disinfection of the hands was impossible. Tincture of iodine was used only to a small extent. Much difficulty was experienced in obtaining sufficient light, and a supply of electric pocket-lamps would have been advisable. The majority of the wounds seen there were on the extremities, and 25 per cent. of the total were inflicted by

artillery fire. The wounds caused by the small-bore rifles healed promptly, even without any dressing. More extensive wounds generally suppurated, even when properly dressed. The lack of surgeons and trained nurses was most keenly felt, but the vital energy of the Montenegrin soldiers was extraordinary. Dr. Tintner and Professor Clairmont, who were with the Bulgarians, said that the prognosis of wounds inflicted by rifle-bullets was very favourable as long as no bone or tendon had been injured, but that wounds caused by artillery fire very frequently became infected. If fighting continued for several days, or if a retreat became necessary, the medical service was very much interfered with. The surgeons agreed that nothing beyond the application of a first dressing should be attempted in the fighting line or in the field hospitals, and that further surgical interference should take place only in the permanent hospitals in the second line. They had used tincture of iodine very extensively with gratifying results. Plaster-of-paris or starch bandages were indispensable, as immobilisation was very important. The medical arrangements of the Bulgarian forces were inadequate, and an unfortunate circumstance was the lack of means of support for the pelvis in dressing injuries of this region. It was important not to perform operations on wounded men immediately after their arrival in a hospital, because an interval of rest might abate the evil effects of shock which were often encountered. Dr. Denk said that he had organised an emergency hospital in Sofia. He found that the condition of the wounded depended chiefly upon the duration of the journey from the battlefield to the hospital; to come from Kirk Kilisse to Sofia sometimes required from six to seven days. Voluntary nurses were plentiful, but they were no great success, only 10 out of 170 having been of any real value. His hospital was quite efficient in respect of equipment, so that all kinds of operations could be performed there. Indiarubber gloves were always used, and ether was employed for producing anæsthesia. He saw numerous atypical injuries of the parts of the body exposed whilst the man was firing, such as the left extremities, the nose, and the right eye. He observed 23 penetrating bullet wounds of the thorax, with only one operation; six penetrating wounds of the abdomen, with two operations; over 100 fractures of the extremities caused by bullets; and 39 cases of injury, with 13 operations. The wounds healed quickly. Out of over 2400 injuries only 13 proved fatal; 18 per cent. of the wounds caused by rifle-bullets, and 26 per cent. of those caused by artillery fire, became infected. Injuries of the extremities were soon mobilised. Dr. Denk saw one single case of mutilation by the Turks, a nose having been cut off. Several instances of the explosive effects of artillery fire were noticed, as when men standing from 20 to 30 yards away from the exploding shell were knocked down and stunned by the concussion communicated to the air, after which they remained deaf or dumb for several days. The surgeons, in conclusion, summed up the results of their experiences in a few recommendations for the guidance of the military medical authorities.

Death of Professor Frank.

Professor Rudolf Frank, one of the best-known surgeons in Vienna, and popular not only with his students and patients but also with his professional colleagues, died recently after a short illness from septic pneumonia. He was born in the year 1862, and succeeded in obtaining a prominent position as surgeon while an assistant to the celebrated Dr. Albert. During this period he became renowned alike for his powers of exact diagnosis and for the brilliancy of his surgical work. He was especially clever at plastic operations and in abdominal surgery, his careful attention to operative details being particularly serviceable in such cases. Among the wide range of subjects discussed in his books and lectures probably the most interest attaches to his work in connexion with congenital occlusion of the rectum, the surgery of the gall-bladder, and Bassini's method of dealing with herniæ. At the time of his death he was director of the third surgical ward of the Vienna General Hospital.

Argyria of the Bladder Associated with Cystitis and Prolonged Use of the Catheter.

An interesting case of disease of the bladder was shown by Dr. Blum at a recent meeting of the Vienna Gesellschaft der Aertze. The patient was a man over 56 years of age, who had been suffering from prostatic troubles and cystitis for more than 30 years, and during all this time he had been forced to use a catheter three times daily and once in the night. He was also accustomed to wash out his bladder with a weak solution of silver nitrate all these years. The presence of a vesical calculus having been ultimately recognised, a very large one was removed by Dr. Blum through a suprapubic incision. The mucosa was black all over the bladder (argyria), and in the chemical laboratory silver was found in the calculus. Prostatectomy was also performed, with the result that after a few weeks the patient could pass his urine voluntarily for the first time in 30 years. Dr. Blum said that this unexpected recovery of the vesical muscles and the return of function was most unusual, as was also the extent of the argyria. This case showed that in similar conditions surgeons would now be justified in holding out some hope of restoration of the function of the bladder.

March 10th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Immigration Medical Inspection.

THE Federal Government has decided to appoint a medical officer in London in connexion with the immigration movement.[1] His duty will be to ensure that no medically unfit persons are accepted as emigrants for Australia. As it is obvious no officer could carry out the necessary inspection, it is proposed that medical examiners shall be nominated in all the large centres of the United Kingdom whose certificates will be approved by the London examiner. The position of affairs in relation to immigration is at present somewhat anomalous. The arrangements are under the control, and at the expense of, the State Governments, whereas the medical inspection on arrival is made by Commonwealth quarantine officials, who have the power to exclude undesirable persons.

Consumption Sanatorium.

The Victorian Government institution for advanced consumptives at Cheltenham, near Melbourne, will be opened in March. The original design was to provide 100 beds, but only about 70 will be available in the new building. The difficulty in finding a suitable matron has now been overcome.

Friendly Societies.

The figures of our Friendly Societies may be of interest at home now that the Insurance Act is in working. Victoria has 142,275 of its population as members of the various societies; New South Wales, 149,442; South Australia, 58,292; Queensland, 42,246; Tasmania, 21,063; and Western Australia, 16,397.

Leprosy in Papua.

It is stated that leprosy is common in Papua, and startling statements are made as to the lack of special sanitary supervision of native villages.

Statistics of the Melbourne Coroner's Office.

The Melbourne city coroner (Dr. R. H. Cole) regrets that the number of inquests for 1912 exceeded by 64 those of the previous year. The increase was mainly due to accidents, and 13 deaths were due to motor-cars. Poisoning cases showed an increase, due in each instance to the use of lysol, and Dr. Cole suggests it should be diluted before being allowed to be sold.

Personal.

Sir C. K. Mackellar, M.D., has been elected chairman of the board of directors of the Bank of New South Wales in place of Sir H. N. MacLaurin, M.D., who has resigned. Dr. Douglas A. Shields has resigned his position as surgeon to in-patients at St. Vincent's Hospital, Melbourne. He will be succeeded at St. Vincent's Hospital by Dr. T. P. Dunhill.

Federal Committee of British Medical Association.

This committee held its second session in Sydney during the second week in January, under the presidency of Mr. W. T. Hayward, of Adelaide. A large number of subjects of interest to the various branches were discussed. In

[1] THE LANCET, Feb. 8th, 1913, p. 425.

response to a request from the Federal Committee reports were read from the branches concerning the necessity for intermediate hospitals, the mode of their establishment, and the method of their control and administration. As the result of a discussion it was concluded that for the present the establishment of such hospitals was not practicable, and that in most States the difficulty was being met by the extension of the ward system in private hospitals and by the acceptance by medical men of reduced fees when necessary from hospital patients, while information at a later date as to the working of the method of intermediate hospitals in Victoria was asked for. On the reading of a motion passed by the Tasmanian Branch calling on the Federal Government to set aside yearly £10,000 for original research the committee resolved:—

That inasmuch as the Federal Government has rendered valuable services by endowing medical research to the extent of £4000 per annum, the Branches be urged to impress upon the Governments of their respective States the desirability of endowing medical research.

On the request of the Queensland Branch the committee resolved that an income-limit clause should be included in all lodge agreements, the model lodge agreement adopted by each Branch to come into operation not later than Dec. 31st, 1913.

Medical Man Knighted.

Dr. David Hardie, who was the recipient of a knighthood in the new year's list of honours, is a very well-known practitioner in Brisbane, and has taken an active part in many local public movements.

Jan. 29th.

THE NATIONAL INSURANCE ACT.

THE GENERAL MEDICAL COUNCIL AND THE NATIONAL INSURANCE ACT.

THE Executive Committee of the General Medical Council at its meeting on Feb. 24th last, considered certain inquiries which had been received by the registrar, with reference to alleged cases of advertising and canvassing by medical practitioners, in relation to the National Insurance Act. The Committee passed the following resolution:—

That the President be requested to communicate with the chairman of the National Insurance Commission asking him to forward to Insurance Committees, to Local Medical Committees, and to Approved Societies, a copy of the Council's Warning Notice in regard to advertising and canvassing for patients.

The minutes of the last meeting of the Executive Committee of the General Medical Council also contain, in the form of an appendix, a memorandum by the National Insurance Act Committee of the Council, dated Jan. 3rd, 1913. This contains copies of correspondence between the President of the Council and Sir Robert Morant, the chairman of the Insurance Commissioners. The first letter from Sir Robert Morant, dated Dec. 4th, 1912, expressed regret that shortness of time prevented the Commissioners from sending copies of the Provisional Regulations and Model Rules for the administration of medical benefit as finally revised to the General Medical Council, in order that that body might have an opportunity of considering them before they were finally passed.

Fees for Anæsthetics.

On Dec. 13th, 1912, the President of the General Medical Council, on behalf of his colleagues on the Insurance Act Committee of the Council, wrote to Sir Robert Morant upon a point arising out of the alternative forms of agreement contained in the first schedule to the Regulations. He asked the Commissioners whether an operating practitioner under any of the forms of agreement marked B, C, D, and E, who, acting in accordance with the expressed views of the General Medical Council, obtained the services of an anæsthetist, might claim a separate payment in respect of the fee paid by him to that anæsthetist. To this question Sir Robert Morant replied on Dec. 16th, 1912, that under any of the systems B, C, D, or E the practitioner who performed an operation (itself within the scope of medical benefit) and employed another practitioner to administer an anæsthetic would be entitled to receive out of the medical benefit fund the stated fee for the anæsthetic, subject to such possible scaling down or up as under systems B, C, or E would apply to all such fees. But under system A the provision of the anæsthetist would be one of the services which the practitioner had contracted to render in consideration of the inclusive capitation fee, and he would in those circumstances have to pay the anæsthetist himself. Commenting on this reply, the National Insurance Act Committee of the Council raised the question whether the terms of Agreement A can properly be held to impose on the practitioner the duty of providing the services of a second qualified person to administer the anæsthetic, in the case of an operation to be performed by the practitioner himself. The forms of Agreement B, C, D, and E, as now officially interpreted, recognise the importance, in "the best interests of the patient," of providing that a qualified anæsthetist other than the practitioner operating, shall be employed; and the National Insurance Act Committee of the Council urged the desirability of intimating officially to Insurance and Medical Committees that local arrangements should be made for securing that qualified assistance should be provided in cases of operation under general anæsthesia undertaken by practitioners who have accepted the capitation system of payment.

Institutional Treatment.

The National Insurance Act Committee of the Council in the statement which they have transmitted to the Commissioners reiterate their opinion that the system of National Health Insurance now established will remain incomplete until proper arrangements have been brought into operation for providing hospital or institutional treatment for insured persons requiring "services beyond the competence of an ordinary medical practitioner." The Committee consider that, if necessary, fresh powers for this purpose should be conferred on the Commissioners by the legislature.

LONDON INSURANCE COMMITTEE.

THE London Insurance Committee at its meeting on March 5th decided to make payments on account to medical practitioners on the panel at the rate of 9*d*. per insured person, the amount expended being £30,000.

It was reported that Mr. E. B. Turner and Mr. Evan Jones had been elected to serve on the Committee by practitioners resident in the county, and that Dr. Florence Willey, Dr. Lauriston E. Shaw, and Dr. H. H. Mills had been appointed members of the Committee by the Insurance Commissioners.

The Committee was informed that the number of deposit contributors in London was 65,096—42,876 men and 22,220 women. As regards insured persons who had not selected or been accepted by doctors, the Medical Benefit Subcommittee stated that before adopting any of the three alternative methods suggested by the Insurance Commissioners it had decided to ask the Committee representing the doctors on the panel for its views as to the methods it would prefer adopted. Meanwhile a notice had been issued to insured persons as to the advisability of arranging for their medical tickets to be signed as soon as possible. Some difficulty had been experienced up to the present in securing treatment for persons of this class when ill, and the Insurance Committee approved a suggestion that medical practitioners who accepted as urgent cases persons requiring treatment who had not yet been accepted by any practitioner should be granted special consideration in connexion with the distribution of the amount available for doctors on the panel during the first quarter.

For the guidance of persons contracting out under Form 43 I.C. the Committee adopted a scale of fees on the basis of which it would pay doctors from a pool. It was pointed out that if the total amount of the bills exceeded the sum in the pool a proportion would be paid on each bill, and the insured person, in the absence of any special arrangements to the contrary, would be liable to the doctor for the payment of the balance. The following is the scale adopted, and it will be noticed that it varies considerably from that under discussion by the Middlesex Insurance Committee as reported in THE LANCET of March 8th, p. 727, although the conditions as between a

London and a Greater London suburb cannot be very different.

	s.	d.
1. Attendance at practitioner's house or surgery	2	0
2. Visit to patient's residence	2	0
3. Special visit	3	0
4. Night visit (between 8 P.M. and 8 A.M.)	4	0
5. Surgical operation requiring local or general anæsthetic, or case of abortion or miscarriage	21	0
6. Administration of general anæsthetic	21	0
7. Setting of fracture { (a) femur	21	0
{ (b) others	10	6
(Subsequent attendances at "visit" rate)		
8. Reduction of dislocation { (a) hip	21	0
{ (b) others...	10	6
(Subsequent attendances at "visit" rate)		

SANATORIUM ACCOMMODATION FOR LONDON.

The London Insurance Committee having asked that accommodation may be found for 200 tuberculous cases in addition to the 300 already provided for at the Downs Sanatorium, the Public Health Committee reported to the London County Council on March 4th that arrangements had been made with the Metropolitan Asylums Board for the reception of 100 women patients and 100 observation and educational cases at the Northern Hospital, Winchmore Hill. The first patients were received there on March 3rd.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Algiers Medical School:* Dr. Sambuc, *agrégé*, lecturer on biological chemistry, has been promoted to Adjunct Professor.—*Berlin:* Dr. Franz Kuhn, of the Elizabeth Hospital, Cassel, has been appointed Director and Chief Surgeon of the Norbert Hospital.—*Bonn:* Dr. Bernhard Schöndorff, *privat-docent* of physiology, has been promoted to Extraordinary Professor.—*Budapest:* Dr. J. Loverich, *privat-docent* of obstetrics, has been appointed Director of the Midwives Institute.—*Caen Medical School:* Dr. Gault has been appointed Lecturer on Physics and Chemistry.—*Freiburg:* Dr. Franz Samuely, *privat-docent* of medicine, and Dr. Hermann Fühner, *privat-docent* of pharmacology, have been promoted to Honorary Extraordinary Professorships.—*Königsberg:* Dr. Friedrich Meyer Betz has been recognised as *privat-docent* of Medicine.—*Leipsic:* Dr. Edward Stadler, *privat-docent* of Medicine, and Dr. Arthur Laewen, *privat-docent* of surgery, have been promoted to Extraordinary Professorships. Dr. Bartels has been appointed Senior Physician to the newly erected great Sanatoria of the Insurance Institute of the kingdom of Saxony at Gottleuba.—*Nancy:* Dr. Etienne, *agrégé*, has been appointed to the chair of General and Medical Pathology, in succession to Dr. Simon.—*Prague (Bohemian University):* Dr. Karl Weigner, extraordinary professor of anatomy, has been promoted to Ordinary Professor.—*Rostock:* Dr. Albrecht Burchard has been recognised as *privat-docent* of Röntgenology.

THE MEDICAL SOCIETY OF LONDON.—The 140th anniversary dinner of this society was held on March 5th at the Whitehall Rooms, Hôtel Metropole, under the chairmanship of Sir W. Watson Cheyne, the President. There was a large company, and a very successful evening was spent. Among the official guests of the society were Sir Rickman J. Godlee, President of the Royal College of Surgeons of England; Sir Francis H. Champneys, President of the Royal Society of Medicine; Sir Alfred Pearce Gould, Dean of the Faculty of Medicine of the University of London; Sir R. Havelock Charles, President of the Medical Board of the India Office; Sir W. Launcelot Gubbins, Director-General of the Army Medical Department; Professor Howard Marsh, Master of Downing College; the Mayor of Marylebone; and Mr. W. B. Taylor, Master of the Society of Apothecaries. The toast of the evening, "The Medical Society of London," was proposed in complimentary terms by Sir Francis Champneys, who briefly referred to the efforts which were made towards amalgamation between that society and the Royal Society of Medicine. In his opinion the Medical Society was perfectly right not to join, and both societies now regarded each other with cordiality and good will. The President responded with a speech full of dry humour. He said that the special function of the society was to keep abreast of current medical thought and practice, and he spoke appreciatively of the valuable discussions which had been held during the session. Mr. Charters J. Symonds, in proposing the toast of "The Guests and Kindred Societies," offered a hearty welcome to the many visitors present. The reply was suitably entrusted to Sir Rickman Godlee and Dr. Leonard G. Guthrie, President of the Harveian Society. The health of "The President" was proposed by Dr. Macnaughton-Jones, who paid an eloquent tribute to Sir Watson Cheyne's worth as a surgeon and as a man. The President, in acknowledgment, spoke of the debt which all present owed to Mr. Edred M. Corner and Dr. R. A. Young, the honorary secretaries, and to Mr. G. Bethell, the registrar, for the excellent evening's entertainment which they had provided. These gentlemen then briefly responded, and a very pleasant gathering broke up.

PRINCESS ALICE MEMORIAL HOSPITAL, EASTBOURNE.—The annual report of the committee of the Princess Alice Memorial Hospital at Eastbourne chronicles the completion of the new wing erected to the memory of King Edward VII., but a sum of £800 or £850 is still required on the building fund, quite independent of the ordinary hospital maintenance contributions. The cost of working the new wing is £1000 a year, but the determined effort made during the past 12 months to obtain new or increased subscriptions only met with a certain measure of success. The committee, however, hope, its appeal will not be in vain. The hospital has received a new steriliser, the gift of Miss Swift, and the Rev. Herbert Alston is defraying the cost of an up-to-date X ray installation, and it is hoped that the radiologist will be at work by the summer.

THE MOUNT VERNON HOSPITAL FOR CONSUMPTION.—At the annual court of governors held at Fitzroy-square, London, on Wednesday last, a resolution was carried, with a few dissentients, to the following effect:—

That the committee of management of this institution be instructed to submit the hospital situate at Hampstead for sale by public auction or otherwise, and to take such steps as counsel may advise for vesting such hospital in the purchaser.

Dr. F. W. Tunnicliffe and Dr. A. J. Whiting, representing the medical staff, considered the course of procedure precipitate, but the sense of the meeting was that no other course was open to those responsible for the conduct of the institution, having regard to the financial position and the falling off in subscriptions and donations.

AT a meeting to which all British practitioners of Otology, Rhinology, and Laryngology were invited, held at the Medical Society's Rooms, Chandos-street, London, W., on Wednesday, March 12th, it was decided to form a new Society for the Study of Disease of the Ear, Nose, and Throat.

THE first meeting of the British Sectional Committee in furtherance of the Second International "First Aid" Congress at Vienna was held on March 11th, Lord Londesborough occupying the chair, at 8, Pall Mall, S.W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Old and the New Session.

PARLIAMENT was prorogued on Friday, March 7th, and with an interval of two days the new session began on Monday, March 10th. The old Parliamentary session extended over 13 months. No great measure of medical interest was passed during it, but from time to time there were announcements made in the House of Commons with regard to the steps taken to bring the Insurance Act into operation. Questions arising out of matters connected with its administration were of almost daily occurrence. A Medical Bill, the design of which was to regularise the periods at which members of the General Medical Council directly representing the profession should be elected passed the House of Lords, but it was blocked in the Lower Chamber. A Milk and Dairies Bill was introduced in the Commons by the President of the Local Government Board, but no materia progress was made with it. It is hoped that the Bill will be reintroduced in the new session.

Tuberculosis Prevention (Ireland) Act.

Amongst the Bills to receive the Royal Assent on Friday, March 7th, was the Tuberculosis Prevention (Ireland Act. Two clauses which

were likely to cause controversy were eliminated from the measure in the House of Commons, and this enabled it to reach the Statute Book now.

The Mental Deficiency Bill.

Definite promise is made in the King's Speech from the Throne of legislation to promote the better care and control of the feeble-minded. That means that, as the Home Secretary stated some months ago, the Mental Deficiency Bill will be reintroduced. It is understood that the text of the new measure will reflect the effect of the discussions which took place in the Standing Committee last session, and probably the searching examination of some of the clauses on that occasion will facilitate the progress of the Bill this year.

Medical Benefit in Ireland.

Some brief criticisms on the Committee which is investigating the demand for the extension of medical benefit to Ireland were made in the course of the debate on the Address in the House of Commons on Monday, March 10th, by Mr. W. O'BRIEN. The honourable Member took objection to the composition of the Committee on the ground that it was not sufficiently representative. He blamed it also for "attempting to hustle this question through in a most partisan spirit, making a rush for two days to Belfast, for two days to Dublin, and for a couple of hours on one day to Cork, in the meantime absolutely shutting out and refusing to hear the representatives of the county councils or any representatives from the agricultural community in Ireland." Mr. O'BRIEN remarked that he had not the slightest objection to medical benefit being extended to any particular Approved Society in Ireland which was willing to pay for it. However, he expressed a preference for devoting the money to the provision of labourers' cottages.

The Treatment of Tuberculosis.

The final report of the Departmental Committee on Tuberculosis has been presented to the House of Commons. In the course of the debate on the Address regret was expressed by several Members that owing to the heavy burden of the rates local authorities had been unable to make provision for the treatment of uninsured persons suffering from tuberculosis.

HOUSE OF COMMONS.

WEDNESDAY, MARCH 12TH.

Small-pox in England and Wales.

Mr. PETO asked the President of the Local Government Board how many cases of small-pox had been notified in England and Wales during the last three months, and the names of the towns wherein the disease had been notified; whether the vaccination officers for the districts where small-pox had occurred had received any special instructions from their boards of guardians or the Local Government Board with regard thereto; and, if, so, what was the nature of those instructions; whether the memorandum dated March, 1901, September, 1901, and signed by the medical officer of the Local Government Board, as to the steps specially requested to be taken in places where small-pox was prevalent was still in force; if so, whether the Local Government Board were still of the opinion that it was by vaccination that the spread of small-pox could be most effectually prevented; and whether boards of guardians, as soon as any case of that disease was brought into or occurred in their respective unions, were to see that measures were promptly taken to secure, as far as was necessary and practicable under the law relating to vaccination, the vaccination (or, as the case may be, re-vaccination) of all such persons as were specially exposed to the danger of the infection.—Mr. BURNS said in reply: 43 cases have been notified from 16 sanitary districts during the three months in question. I shall send the honourable Member the names of the places. No special instructions were given, but a medical inspector visited Newhaven. The memoranda referred to in the question explain the part which should be taken by boards of guardians in places where small-pox is prevalent, and they embody the principal considerations which should guide the guardians' action in such circumstances. In none of the districts referred to was there any prevalence of small-pox calling for special action by the guardians with the exception of Newhaven, where 22 out of the 43 cases occurred. In Newhaven the inquiry by the Board's inspector has shown that all necessary action on the lines of the memoranda was taken by the officers of the guardians concerned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BOWHAY, ALBERT, M.D. Durh., L.R.C.P. Lond., M.R.C.S., L.S.A., D.P.H. Camb., has been reappointed Surgeon to the Tavistock (Devon) Cottage Hospital.

BRODRICK, CHARLES CUMBERLAND, L.R.C.P., L.R.C.S., L.M. Edin., has been reappointed Surgeon to the Tavistock (Devon) Cottage Hospital.

COLEMAN, FRANK, L.R.C.P. Lond., M.R.C.S., L.D.S., has been appointed Lecturer on Dental Materia Medica at the Royal Dental Hospital.

CROWE, HENRY WARREN, M.D., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Bacteriologist to the Tavistock (Devon) Cottage Hospital.

DATE, WILLIAM HORTON, M.R.C.S., L.S.A., has been appointed School Medical Inspector for North Devon by the Devon Education Committee.

DOMVILLE, EDWARD JAMES, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Royal Devon and Exeter Hospital.

DYBALL, BRENNAN, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Royal Devon and Exeter Hospital.

FLEETWOOD, W. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Hoylake District of the county of Chester.

HEWETSON, JOHN T., M.D. Edin., M.Ch. Birm., F.R.C.S. Eng., has been appointed Assistant to the Chair of Midwifery and Diseases of Women in the Birmingham University.

HIGGINS, THOMAS TWISTINGTON, M.B., Ch.B. Vict., F.R.C.S. Eng., has been appointed Resident Medical Superintendent at the Hospital for Sick Children, Great Ormond-street.

HILLYAR, GEORGE HEWLETT STANHOPE, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been reappointed Surgeon to the Tavistock (Devon) Cottage Hospital.

JONES, A., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Widnes District of the county of Lancaster.

LYNE, D. J., L.R.C.P. & S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Castletown Berehaven District of the county of Cork.

PATTERSON, D. WELLS, M.B., B.S. Durh., has been appointed Honorary Assistant Physician to the Royal Victoria Infirmary, Newcastle-on-Tyne.

PENFOLD, W. J., M.B., C.M. Edin., B.Hy., D.P.H., has been appointed Lecturer on Bacteriology and Clinical Pathologist to the Royal Dental Hospital.

RENSHAW, ARNOLD, M.B., B.S. Lond., has been appointed Honorary Pathologist to Ancoats Hospital, Manchester.

THOMAS, W. T., Ch.M. Liverp., F.R.C.S. Eng., has been appointed Professor of Regional Surgery in the University of Liverpool.

WATT, JAMES LESLIE, M.B., C.M. Aberd., has been reappointed Surgeon to the Tavistock (Devon) Cottage Hospital.

WILLINGTON, HERBERT FRANK, L.S.A., has been appointed Surgeon to the Tavistock (Devon) Cottage Hospital.

YOUNG, THOMAS, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer for the Bittadon, Morthoe, and West Down Districts by the Barnstaple (Devon) Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANTRIM COUNTY COUNCIL.—Tuberculosis Medical Officer. Salary £500 per annum.

BARNSTAPLE UNION.—Medical Gentleman to undertake Care of Sick Poor for Parish of Ilfracombe. Salary £70 per annum.

BARNSTAPLE, NORTH DEVON INFIRMARY.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Junior Resident Medical Officer. Salary at rate of £40 per annum, with board, residence, &c. Also Assistant Physician.

BETHLEM HOSPITAL.—Two Resident House Physicians, unmarried, for six months. Salary at rate of £25 each per quarter, with board, residence, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Two House Surgeons, Senior and Junior. Salaries £100 and £80 respectively, with board and laundry.

BIRKENHEAD UNION WORKHOUSE AND INFIRMARY.—Senior Resident Assistant Medical Officer. Salary £130 per annum, with board, apartments, &c.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street.—Resident Surgical Officer. Salary £100 per annum, &c. Also Three House Surgeons—First House Surgeon, £90; Second House Surgeon, £80; Third House Surgeon, £75 per annum, &c.

BIRMINGHAM, QUEEN'S HOSPITAL.—House Physician for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BLACKBURN COUNTY BOROUGH.—Medical Officer of Health and School Medical Officer. Salary £750 per annum.

BOOTLE BOROUGH (GENERAL) HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and laundry.

BOURNEMOUTH, ROYAL NATIONAL SANATORIUM FOR CONSUMPTION.—Resident Medical Officer. Salary £200 per annum, with board, residence, and washing.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS.—Second Assistant to Medical Superintendent. Salary £140 per annum, with apartments, rations, &c.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £50 per annum, with apartments, board, and laundry. Also Assistant House Surgeon, unmarried, for Septic Block. Salary £80 per annum, with apartments, board, and laundry.

BRIGHTON AND HOVE HOSPITAL FOR WOMEN.—House Surgeon, unmarried, for six months. Salary £80 per annum, with apartments, board, attendance, &c.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and laundry.

BRISTOL GENERAL HOSPITAL.—Honorary Physician or Surgeon to Throat and Nose Department.

BRISTOL ROYAL INFIRMARY.—Obstetric and Ophthalmic House Surgeon for six months. Salary at rate of £75 per annum, with board, laundry, and apartments.

BUXTON, DEVONSHIRE HOSPITAL, Derbyshire.—Assistant House Physician for six months. Salary £100 per annum, with apartments, board, and laundry.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, washing, and attendance.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £80 per annum, with board, apartments, and laundry.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

DOUGLAS, NOBLE'S HOSPITAL, Isle of Man.—Resident House Surgeon, unmarried. Salary £90 per annum, with board and washing.

DUNDEE ROYAL INFIRMARY.—Anæsthetist and Instructor in Anæsthetics in the University of St. Andrews. Salary £200 per annum.

DURHAM COUNTY COUNCIL.—Chief Assistant School Medical Officer. Salary £300 per annum.

EAST LONDON MUNICIPALITY, South Africa.—Medical Officer of Health. Salary £600 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—Clinical Assistants.

GROSVENOR HOSPITAL FOR WOMEN, Vincent-square, Westminster.—Registrar.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £75 per annum, with board, residence, and laundry.

HUDDERSFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £60 per annum, with board, residence, and washing.

KETTERING AND DISTRICT GENERAL HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, residence, &c.

KING'S COLLEGE FOR WOMEN, DEPARTMENT OF HOME SCIENCE.—Lecturer in the Department of Physiology and Hygiene. Salary £300 per annum. Also Demonstrator. Salary £200 per annum.

KING'S LANGLEY, HERTS, LEAVESDEN ASYLUM.—Second Assistant Medical Officer, unmarried Salary £180 per annum, with board, lodging, and washing.

LEAMINGTON SPA, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL AND MIDLAND COUNTIES BATHING INSTITUTION.—House Surgeon and House Physician. Salary £100 and £85 respectively, with board, residence, and laundry.

LEEDS EDUCATION COMMITTEE.—Three Assistant School Medical Officers. Salary £300 per annum.

LEEDS, CITY TRAINING COLLEGE.—Medical Officer and Lecturer on Hygiene. Salary £500 per annum.

LEICESTER ROYAL INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, apartments, and washing.

LICHFIELD, COUNTY MENTAL HOSPITAL, Burntwood.—Junior Assistant Medical Officer, unmarried. Salary £210 per annum, with apartments, board, and washing.

LIVERPOOL, HIGHFIELD INFIRMARY, Knotty Ash.—Assistant Medical Officer. Salary £120 per annum, with apartments, &c.

LIVERPOOL INFIRMARY FOR CHILDREN.—Two Resident House Physicians and Resident House Surgeon, all for six months. Salary £30 in each case, with board and lodging.

LIVERPOOL STANLEY HOSPITAL.—House Physician. Salary £75 per annum, with board, residence, and laundry.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Salary £40, with board and residence. Also Medical Registrar. Salary at rate of 40 guineas per annum.

MACCLESFIELD GENERAL INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board and residence. Also Junior House Surgeon. Salary £80 per annum, with board and residence.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham.—Resident Medical Officer (female) for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Junior House Surgeon, unmarried, for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary at rate of £85 per annum, with board, residence, and laundry.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £170. Also Resident and Assistant Resident Surgeons for Branch. Salaries £180 and £170 per annum respectively, with apartments, attendance, light, and fuel.

NOTTINGHAM WORKHOUSE AND INFIRMARY.—Two Assistant Resident Medical Officers. Salary £150 per annum, with apartments, board, attendance, and washing.

OLDHAM ROYAL INFIRMARY.—Third House Surgeon in Ophthalmic, Casualty, and Out-patients' Departments for six months. Salary at rate of £80 per annum, with residence, board, and laundry.

PARISH OF PADDINGTON.—Medical Superintendent of the Infirmary and Medical Officer of the Workhouse. Salary £400 per annum, with unfurnished house, washing, &c.

PRESTON ROYAL INFIRMARY.—Senior House Surgeon, unmarried, for six months. Salary £80 per annum, with board, residence, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and washing.

RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board and apartments.

ROCHDALE INFIRMARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

ROTHERHAM HOSPITAL.—Senior House Surgeon. Salary £110 per annum, with board, lodging, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road, London, W.C.—Assistant Surgeon.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Clinical Assistants.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Third House Surgeon for eight months. Salary at rate of £50 per annum, with board and residence.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five appointments.

ST. GEORGE'S UNION INFIRMARY, Fulham-road, S.W.—Second Assistant Medical Officer. Salary £130 per annum, with board, residence, and washing.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, W.—Honorary Surgeon.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion-square, W.C.—Honorary Assistant Surgeon.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Surgeon to Out-patients.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, &c.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E.—DREADNOUGHT HOSPITAL, Greenwich: Assistant Pathologist to the Hospital and School. Salary £100 per annum, with lunch and tea. Also Two House Physicians and Two House Surgeons, all for six months. Salary in each case £50 per annum, with board, residence, and washing. ALBERT DOCK HOSPITAL, Connaught-road, E.: Senior House Surgeon. Salary £100 per annum, with board, residence, and washing. Also House Surgeon. Salary £50 per annum, with board, residence, and washing.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—Ophthalmic House Surgeon, Aural House Surgeon, and Assistant House Physician, all unmarried. Salary £70 each per annum, with board and residence.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £60 per annum, with rooms, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior and Junior House Surgeons. Salaries £100 and £90 per annum respectively, with residence, board, and washing.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

SUNDERLAND, ROYAL INFIRMARY CHILDREN'S HOSPITAL.—Resident Medical Officer for six months. Salary £80 per annum, with board, residence, and laundry.

SURREY EDUCATION COMMITTEE.—Assistant Medical Officer. Salary £250 per annum.

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments board, washing, attendance, &c.

TIVERTON HOSPITAL, Devon.—House Surgeon and Dispenser. Salary £80 per annum and all found.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 per annum, with board, residence, &c.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, attendance, and washing.

WOKINGHAM, PINEWOOD SANATORIUM, near Wokingham, Berks.—Resident Medical Superintendent. Salary £400 per annum, with residence and board.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Acts at Lisbellaw, in the county of Fermanagh; and at Littleborough, in the county of Lancaster.

THE Secretary of State for the Home Department gives notice of vacancies for Medical Referees under the Workmen's Compensation Act, 1906, for the Dunoon and Inverary District of the Sheriffdom of Argyll; and for the Dumbarton District of the Sheriffdom of Stirling, Dumbarton, and Clackmannan.

New Addresses.

BARRINGTON-WARD, L. E., F.R.C.S., 32, Harley-street, W. Telephone: 2807 Mayfair.

A fee of 2s. 6d. is charged for the insertion of Notices of Change of Address, which must not exceed two lines.

Births, Marriages, and Deaths.

BIRTHS.

ACKERLEY.—On March 7th, at Quisisana, Llandrindod Wells, the wife of Dr. R. Ackerley, of a daughter.

GRAY.—On March 5th, at Yew Tree Cottage, West Malling, the wife of Henry Gray, M.R.C.S., L.R.C.P., of a daughter.

HAWARD.—On March 10th, at Priory-road, N.W., the wife of Walter Haward, M.B., B.S., of a son.

SMITH.—On March 5th, at Virginia Water, Surrey, the wife of George W. Smith, M.B., Ch.B., of a son.

MARRIAGES.

MAY—CARPENTER.—On March 4th, at St. Mary's Church, Stoke Newington, Lewis James May, M.R.C.S., to Louisa, youngest daughter of the late William Carpenter and of Mrs. Carpenter, of Lordship-road, Stoke Newington.

DEATHS.

COLBY.—On March 5th, J. G. Ernest Colby, M.A., M.B., B.Ch. Oxon., F.R.C.S. Eng.

TATE.—On March 10th, William Barney Tate, M.D., M.R.C.P., for 54 years Medical Superintendent of the Coppice Hospital, Nottingham, aged 86. Funeral took place on Thursday, March 13th.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HEALTH OF POST OFFICE STAFF.

IN his report for 1911-12, presented to Parliament, the Postmaster-General states that the health of the staff during the year was satisfactory. The statistics given relate to the whole of the staff at the towns where departmental medical officers are employed, numbering 83,983 men and 14,768 women on the established staff, and 46,204 men and 4469 women on the unestablished staff—a total of 130,187 men and 19,237 women. The average sick-rate of the established staff was 7·6 days for men and 12·4 days for women, and of the unestablished staff 4·2 days for men and 4·7 days for women. Seventy deaths and 125 retirements were due to diseases of tubercular origin. 272 male and 16 female officers died during the year, 617 male and 114 female officers were invalided, and 228 male and 17 female officers were superannuated at the age of 60 and upwards. The deaths represented a rate of 3·2 per 1000 among men and 1·0 among women. The number of women who retired on marriage was 450, with an average of 28 years of age and an average of 9 years' service.

The committee appointed to inquire into the prevalence and causes of telegraphists' cramp and the means to be adopted for its prevention made their report, which was duly presented to both Houses of Parliament. (See THE LANCET, March 30th and April 6th and 13th, 1912.) The reports obtained by the committee indicated that the number of the staff employed wholly on telegraph work suffering from "cramp," though difficult to estimate precisely, was sufficiently large to justify the consideration of definite measures of prevention. "The matter is one of peculiar difficulty. The committee formed the opinion that the risk of breakdown could never be completely eliminated while manual work on telegraph instruments continued, but they made a number of recommendations with a view to reduce the prevalence of cramp to a minimum. Effect has already been given to a number of these recommendations, and careful consideration is being given to the remainder. Most of the proposals of the committee of medical officers appointed to inquire into the working conditions of telephonists have been adopted. In certain cases of exceptional difficulty the matter is still under consideration. Among the recommendations made may be specially mentioned the abolition of duties involving long and short attendances on alternate days, the provision of sick bays and sitting-rooms at large exchanges, and the introduction of a more suitable type of chairs for the operators."

INJECTIONS OF DISTILLLED WATER IN SYPHILIS.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me a little space to ask some of your readers if they will be good enough to test (and, if possible, to corroborate) some very good curative results I have had in the treatment of syphilis by means of the subcutaneous injection of distilled water? I was induced to try this method as the result of some experiments of mine in connexion with the surface tension of serums and such like fluids.

The cases treated were inmates of the Swansea union infirmary, and the work done was under the observation of Dr. J. R. Lloyd Edwards, the medical superintendent, and his assistant, Dr. J. Dunbar. The distilled water was injected every third day in quantities of 6 to 8 c.c. into the subcutaneous tissue of the back. After three doses all the patients looked and felt much better, and the ulcers appeared very much cleaner. After each dose the temperature showed a rise characteristic of vaccine treatment.

By the end of the third week all the patients were markedly improved, although no mercury in any form was administered. One patient, an alcoholic prostitute, with tertiary ulceration of the cheeks and a large ulcer on the left shin, reacted splendidly, her appearance at the end of the period being quite altered. A man with ten ulcers of the leg, which had refused to yield to any other treatment, had eight of them covered over by the end of the fortnight. A young woman in the rupial stage, of sallow complexion, after three injections developed a healthy colour in her cheeks, whilst two small swellings which were threatening to "break" became absorbed and disappeared.

I am, Sir, yours faithfully,

Swansea. G. ARBOUR STEPHENS.

THE NORTHERN TERRITORY OF AUSTRALIA.

THE Northern Territory of Australia occupies the centre of the continent between 129–138° East longitude as far as 26° South latitude, and its administration was taken over by the Commonwealth in 1911. The Department of External Affairs at Melbourne has issued two Bulletins dealing with the territory, No. 1 being the report of the Preliminary Scientific Expedition, 1911, and No. 1A being a report on health and disease in the territory. The work of the scientific expedition was concerned, amongst other matters, with the general health of the community, the conditions of life in reference to settlement of the country, the aborigines, the suitability of the country for stock, and the broad geological features of the country, mainly in view of mining and agriculture. The expedition worked in that portion of the territory lying north of lat. 15° South, starting from Darwin and working across by Pine Creek, the Catherine and Roper Rivers, to the Gulf of Carpentaria. On the whole, the report states that the country is suitable for settlement, but further investigations are necessary as to the condition of the country during summer, both as regards human beings and stock. The report upon health and disease is the work of Dr. A. Breinl, Director of the Australian Institute of Tropical Medicine. His conclusions are that malarial fever, both the simple tertian and the subtertian, is "fairly widespread in the Northern Territory, the latter type being in all probability introduced from New Guinea by insufficiently treated parasite carriers." The intermediary host is most likely a species of mosquito known as Nyssorhynchus annulipes. Syphilis is widespread among both the black and the white population. The aborigines on the whole seem to enjoy fairly good health, but suffer from some diseases of unknown origin, which require further study as regards their etiology and spread. One disease in particular occurs sporadically among blacks of different tribes and is known as "living skeleton." It is said to be very chronic and to begin sometimes as a "low fever" and sometimes without any special symptoms. The patient becomes more and more emaciated, fat entirely disappears, there is no muscular paralysis, but the extreme weakness prevents the sufferer from walking. In the one case which Dr. Breinl was able to examine the liver and spleen were both much enlarged, smooth, and hard. No blood parasites were found. As to the general suitability of the Northern Territory for a white population, a collection of facts is desirable, but life on the stations—i.e., away from the towns—is, says the report, "ideal from a health point of view."

A FORTUNE TELLER WHO PREDICTED DEATH.

AT Marlborough-street police court recently Mr. Mead inflicted a fine of £5, with the alternative of 14 days' imprisonment, upon a woman doing business as a "palmist" in Oxford-street under the name of Madame Liska. The defendant's case does not appear to have been assisted by one of the instances which she herself brought forward of the accuracy of her predictions. She stated that she had foretold to a woman who came to her, then being about to become a mother, that her child would die. The accuracy of this evidence was not questioned, and it was actually corroborated by the mother in question and by the defending advocate, who, desiring to introduce an extenuating circumstance, informed the magistrate that the child did not die until some months after it was born. This was in reply to observations from Mr. Mead, who expressed his horror and disgust at such a suggestion being made to a pregnant woman with regard to her expected offspring. He said of the defendant's trade in passing sentence, 'It is a cheat and a fraud, and in this case was attended with serious results. The very thing which you wickedly prognosticated and which you knew nothing about, happened, and people believing these things help to bring them on themselves."

THE INTERNATIONAL BUILDING EXHIBITION AT LEIPZIG.

THE First International Building Exhibition will be opened at Leipzig in May and will remain open until October. From an interesting beautifully illustrated article thereon in the March issue of *Concrete and Constructional Engineering*, we learn that besides the general principles of house construction and sanitation, the settlement question, and the garden city movement, special exhibitions have been erected to deal with the protection of workmen and the whole question of the sanitary provision for workmen. The section for workmen's provision has the services of a group of prominent medical men, and enjoys the support of the trades unions and the National Bureau of Insurance. A whole town, with streets, squares, and alleys, represented as they were in 1813 (the year of the battle of Leipzig), has been erected with the name of Old Leipzig.

A NEW METHOD OF LIGHTING OPERATING THEATRES.

IT is often necessary to have recourse to artificial light in operating theatres at night time, but even during the day it may happen that there is insufficient light owing to fogs and cloudiness; yet artificial light does not equal the light of day, for the great superiority of daylight consists in the fact that the light is diffused and there are fewer abrupt shadows. The great difficulty of artificial lighting is that it is almost impossible to avoid shadows, so that the operator is continually finding that his hands, or the hands of his assistants, are casting shadows which hide what he wishes to see. The usual method of attempting to overcome this trouble has been to multiply the lamps, and this does remove the difficulty to some extent, but generally the light is not sufficiently intense. A new method has been devised by Mr. E. Leitz; it was installed at Strassburg about a year ago, and we understand that it has proved very successful. The source of the light is an arc lamp, which is placed outside the theatre, and the light passes through an opening in the wall after it has encountered a parabolic reflector which sends it forward as a beam of parallel rays. When it reaches the theatre it meets a hexagonal pyramid of reflecting surfaces inclined at an

angle of 45° to the axis of the beam, and this splits it up into six minor beams parallel to the wall through which the light has come. Each of these beams meets with a mirror by which its direction is altered. Four of the beams are reflected to other mirrors in the ceiling whence they are reflected on to the operation table. Another beam is reflected directly on to the table, and the last beam is doubly reflected so that it also reaches the table, but from the opposite direction. The area illuminated by these beams has a diameter of 12 to 16 inches—that is to say, it is large enough to illuminate thoroughly the operation area. Should the light prove too strong an iris diaphragm serves to moderate its strength without any diminution of the area illuminated. The light supplied enables the surgeon to use his hands and instruments freely, and he may even bend over the patient without any fear of cutting off the light. A piece of glass is fitted into the opening by which the light enters the theatre to prevent currents of air through the opening. The method should prove useful, and especially is it likely to be of value in a climate like that of London where the atmospheric conditions are often ill suited for operations.

THE STANGEROTHERM ELECTRIC HEAT CARPET.

THE suggestion of keeping a carpet warm by electric current sounds attractive, besides which the temperature produced and maintained is, of course, available for warming the air of the room in a general way. Further, the method is hygienic. The idea has taken practical shape in the Stangerotherm electric heat carpet, a specimen of which has been submitted to us by the Schniewindt Electric Company, of 40 and 41, Staniforth-street, Birmingham. The principle is a simple one, a series of resistance cells being employed to transform the electric current into thermal energy. Their construction is such that the mat in which they are contained can be rolled up and put away when not required. Three different degrees of warmth are attainable by the use of a regulating switch, and the "carpet" can be adjusted to any voltage of supply. The device should prove a source of comfort to those who suffer from cold feet, and it should have a number of useful applications in hospital and home, provided that its structure ensures a sufficiently long life and that the cost of "running" is not excessive.

THE PRACTITIONER'S PRESCRIPTION BOOK.

Messrs. William Collins, Sons, and Co., Limited, have forwarded for inspection copies of their new "Practitioner's Prescription Book," price 6d. It is the ordinary manifolding book, with two prescription blanks to a page, perforated. At the end follow perforated sickness certificate forms, and a series of pages are devoted to notes. The books are 4 × 6½ and ⅝ inch thick.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced:—

March 17th–20th (Paris).—International Congress of Physical Education.
,, 25th (Berlin).—Twelfth Congress of the German Association for Orthopædic Surgery.
,, 26th–29th (Berlin).—Forty-second Congress of the German Surgical Association.
,, 26th–30th (Berlin).—Fourth International Congress for Physio-therapy.
,, 29th and 30th (Berlin).—Ninth Congress of the German Roentgen Society.
April 3rd–9th (London).—International Congress of Historical Studies.
,, 6th–12th.—Health Week.
,, 15th–18th (Wiesbaden).—Congress of Internal Medicine.
,, 22nd–25th (London, Horticultural Hall).—Nursing Conference and Exhibition.
,, 26th (Ghent) (opens).—International Exhibition.
May 15th–18th (Paris).—Twenty-first Annual Congress of the Royal Institute of Public Health.
June 24th–27th (London, Ontario).—Canadian Medical Association.
July 7th–12th (Exeter).—Twenty-eighth Congress of the Royal Sanitary Institute.
,, 16th–18th (Oxford, Keble College).—Oxford Ophthalmological Congress.
Aug. 4th and 5th (London, Caxton Hall).—English-speaking Conference on Infant Mortality.
,, 6th–12th.—(London).—Seventeenth International Congress of Medicine.
,, 20th (Ghent).—Third International Congress of Neurology and Psychiatry.
Sept. 2nd–6th (Groningen).—International Physiological Congress.
,, 9th–13th (Vienna).—Second International Congress of Life Saving and Prevention of Accidents.
,, 10th–17th (Birmingham).—British Association.
,, 22nd–28th (Milan).—Fourteenth International Anti-alcoholic Congress.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

TUESDAY.

SECTION OF THERAPEUTICS AND PHARMACOLOGY (Hon. Secretaries: H. H. Dale, W. Langdon Brown): at 4.30 P.M.

Adjourned Discussion:
On the Non-operative Treatment of Malignant Disease. Summary and reply by Dr. T. J. Horder.

Paper:
Prof. A. R. Cushny, F.R.S.: The Action of Drugs on Respiration.

SECTION OF PATHOLOGY (Hon. Secretaries—H. R. Dean, Gordon W. Goodhart): at 8.30 P.M.

Dr. H. H. Dale: Anaphylactic Reaction in the Guinea-pig and its Modification by Strong Salt Solution.
Dr. J. A. Braxton Hicks: An Account of an Organism of an Unusual Kind isolated from a Case of Septicæmia.
Dr. H. R. Dean: An Attempt to Preserve Hæmolytic Complement in a Permanent Form.

WEDNESDAY.

SECTION OF ELECTRO-THERAPEUTICS (Hon. Secretaries—Cecil R. C. Lyster, G. Allpress Simmons): at 8.30 P.M.

Adjourned Discussion:
On the Use of X Rays in the Diagnosis of Pulmonary Tuberculosis.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY.—4.30 P.M., Exhibition of Pathological Specimens. Cases sent for Consultation. Clinical Cases will be shown by Dr. M. Dockrell, Dr. J. L. Bunch, Dr. W. K. Sibley, and Dr. W. Griffith. Discussion on the Intracellular Parasites in Syphilis and in Allied Conditions in Animals (opened by Mr. E. H. Ross, who will give a demonstration of the organisms).

ROYAL STATISTICAL SOCIETY, Rooms of the Royal Society of Arts, John-street, Adelphi, W.C.

TUESDAY.—5 P.M., Paper:—Dr. E. C. Snow: Some Statistical Problems suggested by the Sickness and Mortality Data of Certain of the Large Friendly Societies.

CHELSEA CLINICAL SOCIETY, Club Rooms of the Medical School St. George's Hospital, S.W.

TUESDAY.—8.30 P.M., Annual Clinical Debate on Neurasthenia. Paper:—Dr. H. Macnaughton Jones: The Influence of Puberty and the Menopause as Disposing Causes of Neurasthenia. Followed by a discussion in which Dr. L. Williams and others will take part.

MEDICO-LEGAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—8.30 P.M., Prof. H. Littlejohn: (1) The Detection of Minute Traces of Blood; (2) Statement as to the Forensic Medicine Section of the Medical Congress, 1913.—Dr. H. B. Spilsbury: Note on Two Cases of Cut Throat.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, Lecture Theatre of the Society, 17, Bloomsbury-square, W.C.

WEDNESDAY.—8 P.M., Prof. R. T. Hewlett: Microbiology in Relation to the Prevention of Disease (Lecture III.). (Post-Graduate Lecture.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. W. Fox: Clinique (Skin). 5.15 P.M., Lecture:—Dr. R. T. Timberg: The Therapeutic Application of Physical Exercises.
TUESDAY.—4 P.M., Dr. G. A. Sutherland: Clinique (Medical). 5.15 P.M., Lecture:—Dr. H. Orton: The Value of X Rays as an Aid to Diagnosis.
WEDNESDAY.—4 P.M., Mr. R. R. Carling: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. D. Windle: Irregularities of the Pulse in Toxic Conditions, their Clinical Recognition and Significance (lantern demonstration).
THURSDAY.—4 P.M., Mr. G. Taylor: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. C. Rowntree: Injuries and the Workmen's Compensation Act.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. T. Gray: Abdominal Pain.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures. &c. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin. 5 P.M., Lecture:—Mr. T. Gray: Some Congenital Deformities.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Souttar: Injuries of the Brachial Plexus.

THURSDAY.—10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. Brompton, S.W.

WEDNESDAY.—4.30 P.M., Dr. C. Wall: Dyspnœa.

CANCER HOSPITAL, Museum of the Hospital, Fulham-road, S.W.

WEDNESDAY.—5 P.M., Dr. R. KNOX: The Radium Treatment of Cancer (illustrated by cases and microscopic and other specimens).

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.

Course of Lecture-Demonstrations on Diseases of the Chest, with Special Reference to Tuberculosis (including a Tuberculin Course):—

MONDAY.—4.30 P.M., Dr. Jordan.

WEDNESDAY.—4.30 P.M., Dr. N. Bardswell.

LISTER INSTITUTE OF PREVENTIVE MEDICINE, Chelsea Bridge-road, S.W.

TUESDAY.—5 P.M., Prof. A. Harden: The Chemical Action of Bacteria.

ROYAL EYE HOSPITAL (LONDON SCHOOL OF OPHTHALMIC SURGERY AND MEDICINE), St. George's-circus, Southwark, S.E.

TUESDAY.—4.30 P.M., Lecture:—Mr. Griffith: Eye-strain, Difficult Cases and their Relief.

UNIVERSITY OF LONDON (UNIVERSITY COLLEGE), The Francis Galton Laboratory for National Eugenics.

TUESDAY.—8 P.M., Lecture:—Prof. K. Pearson: On Recent Studies of Heredity in Dogs, and their Bearing on Heredity in Man.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), London Hospital, Mile End-road, E.

Course of Lectures and Demonstration on Neurology (illustrated with Clinical Cases):—

MONDAY.—4.30 P.M., Dr. T. Thompson: Syringomyelia.

TUESDAY.—4.30 P.M., Dr. Turnbull: Disseminated Sclerosis and Syringomyelia.

BIRMINGHAM GENERAL HOSPITAL.

TUESDAY.—3.30 P.M., Mr. B. Whitehouse: Uterine Hæmorrhage. (Post-Graduate Clinic.)

ROTUNDA HOSPITAL POST-GRADUATE COURSES, Dublin.

MONDAY.—10 A.M., Obstetrical Lecture: The Treatment of the Common Varieties of Contracted Pelvis. 11 A.M., Examination of Patients and Minor Operations.

TUESDAY.—10 A.M., Major Operations. 4 P.M., Class in Gynæcological Diagnosis.

WEDNESDAY.—10 A.M., Obstetrical Lecture: The Treatment of the Rarer Varieties of Contracted Pelvis. 11 A.M., Examination of Patients and Minor Operations.

THURSDAY.—10 A.M., Major Operations.

FRIDAY.—10 A.M., Gynæcological Lecture: Malignant Disease of the Uterus. 11 A.M., Examination of Patients and Minor Operations. 4 P.M., Class in Gynæcological Diagnosis.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1912 were given in THE LANCET of Dec. 28th, 1912.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1912 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

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The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 12th, 1913.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Mar. 6	30·08	S.W.	...	96	60	48	48	51	Overcast
,, 7	30·01	S.W.	0·09	82	52	43	42	44	Fine
,, 8	30·18	W.	...	81	50	37	36	38	Fine
,, 9	30·49	W.	0·03	68	49	37	38	39	Cloudy
,, 10	30·33	S.W.	...	56	52	39	46	49	Overcast
,, 11	30·25	S.W.	0·11	73	54	46	45	47	Fine
,, 12	30·35	S.E.	...	89	55	39	39	42	Fine

The following journals, magazines, &c., have been received:—Æsculape, Chrónica Médica, Proceedings of the Canal Zone Medical Association, Archives Générales de Médecine, Bulletins et Mémoires de la Société de Radiologie, Zentralblatt für Röntgenstrahlen, Radium und verwandte Gebiete, Archives of Pediatrics, American Journal of Medical Sciences, Jahrbuch für Kinderheilkunde, Monthly Cyclopedia and Medical Bulletin, Ash's Monthly, Dominion Medical Monthly, Journal of Surgery, Cleveland Medical Journal, Proceedings of the Engineers' Club of Philadelphia, Archives of the Roentgen Ray.

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Messrs. Armour and Co., Lond.; Addenbrooke's Hospital, Cambridge, Secretary of; Auto-Teapot Co., Leicester.

B.—Messrs. Burroughs, Wellcome, and Co., Lond.; Beckett Hospital and Dispensary, Secretary of; Mr. J. Berry, Lond.; Dr. Charles Bolduan, New York; Mr. Adolph Bronner, Bradford; Messrs. Butterworth and Co., Lond.; Birmingham and Midland Eye Hospital, General Superintendent of; Mr. W. Bryce, Edinburgh; Burntwood Asylum, Lichfield, Medical Superintendent of; Bedford County Hospital, Secretary of; Bayer Co., Lond.; Dr. C. F. Bainbridge, Parkstone; Mr. F. Brachi, Pietermaritzburg; Bootle Borough Hospital, Secretary of; Blackburn Corporation, Clerk to the; Dr. Sidney Boyd, Lond.; Dr. W. Blair Bell, Liverpool; Mr. Herbert H. Brown, Ipswich; Mr. G. N. Biggs, Lond.; Mr. Arthur E. Barker, Lond.

C.—Messrs. T. Craven and Sons, Lond.; The Coppice, Nottingham; Messrs. Cassell and Co., Lond.; Chesterfield and North Derbyshire Hospital, Secretary of; Central London Throat and Ear Hospital, Lond., Secretary of; Messrs. Crossley and Co., Lond.; The Saml. A. Crocker Co., Cincinnati, O.; Dr. A. Creazzo, Rome; City of London and East London Dispensary, Lond.; Canterbury Borough Asylum, Clerk to the; Cancer Hospital, Lond., Secretary of; Messrs. Samson Clark and Co., Lond.; Messrs. J. and A. Churchill, Lond.; Messrs. Carnrick and Co., Lond.; Dr. G. D. H. Carpenter, Entebbe, Uganda; Crichton Royal Institution, Dumfries; C. J. J. H.; Messrs. W. Collins, Sons, and Co., Lond.; Major W. W. Clemsha, I.M.S., Calcutta; Dr. Disney H. D. Cran, Paris; Church of England Temperance Society, Lond., Manager of; Dr. H. Warren Crowe, Yelverton.

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